A DEBATE ON THE

CLASS SIZE/ ACHIEVEMENT CONTROVERSY

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ically increase their per-pupil expenditure levels over the five-year phase-in period.

Educational Equity. All too often it is assumed that the state's responsibility for education is met through exclusively fiscal means. In this respect state support plans generally fall short. Connecticut's equity plan creates a partnership between the State Department of Education and each local school district to insure that each public school pupil receives a suitable educational program. Indeed, this is the plan's hallmark.

In this partnership school districts must offer a program of instruction that includes at least the following subject matter: the arts, career education, consumer education, health and safety, language arts, mathematics, physical education, science, and social studies. In addition, at the secondary level one or more foreign languages must be offered, plus vocational education. Connecticut's new partnership calls for the State Department of Education to provide technical assistance to districts in developing these required instructional programs. The law brings parents into the partnership by creating a legal process through which inadequacies in local school districts can be addressed and remedied.

The historic loose affiliation between the state and local boards of education is likely to change under the new plan. The state role is strengthened, and, while local control hypothetically remains undisturbed, the new partnership is perceived by some as centralizing authority in the State Department of Education and reducing the power of local boards. This is one of the problems the people of Connecticut face in putting the law into effect. Another is the state's capacity to pay for this program. Connecticut has no personal income tax. A 7.5% sales tax brings in about one-third of the state revenues. In fiscal year 1981 the state budget will go sharply upward because of subsidies to local school districts. Pressures on the budget will increase year by year. When the equity plan is phased in for full funding in fiscal year 1984, the cost to the state may reach half a billion dollars. The equity program may have the unintended effect of forcing Connecticut to examine its taxing machinery.

Formidable challenges face local and state education leaders in carrying out the intent of the equity plan. Nevertheless, the state legislature has demonstrated a good-faith effort to provide equitable educational opportunities for Connecticut's public school children. □

Home Tutorials vs. the Public Schools in Los Angeles

by Roy A. Weaver, Anton Negri, and Barbara Wallace

The Home Tutorial Program: An Educational Alternative grew out of court pressure for desegregation of the Los Angeles schools. The project gave researchers at the University of Southern California an unprecedented opportunity to study the effectiveness of home tutelage. Here are tentative conclusions.

Referring to a home-based educational alternative created in the San Fernando Valley in 1978 by an anti-busing group, former Los Angeles Unified School District Board President Howard Miller claimed that it was a disgrace to "sandwich children between a refrigerator and a television set." He predicted that "if the program lasts two more months, it will be a long time." Thirty months later, what was begun on 19 April 1978 by the group's current president, Michael Gould, and former co-president Joel Henenberg is a small but growing group instructional program.

During the first two years of operation, the program was open only to children in grades 4 through 8. Nearly 1,000 children were enrolled the first year. Enrollment dropped to about 430 last year. Several facts may explain the dramatic loss. Thirty new private schools opened in the San Fernando Valley. Existing ones expanded facilities. After the first year, fear of busing subsided (the Gould-Henenberg group was called Welby Elementary Parents Against Busing or WEPAB). The cost of the program was excessive for some of the poorer families. Some parents left because they were dissatisfied. Now, however, Superior Court Judge Paul Egly's expansion of mandatory desegregation of the Los Angeles schools to grades 1-8 for 1980-81 is expected to boost enrollment back to initial levels. The current leaders — Gould, Erlene Cohen, Roy Nussbaum, and Carole Martin — remain cautious, noting unexpected problems besetting the group in the past.

Most problems faced by the group, whose name is now Home Tutorial Program: An Educational Alternative,* have been political. In an attempt to establish credibility in the community, the group decided early on to ask the Los Angeles City Council for a definition of tutoring. The strategy was to gain respectability through being named in a local ordinance. The group drew attention, but not the kind it desired. A council member attempted to pass an ordinance that would force the group to get a land use variance. It would have required the group to pay over $600 for the inspection of each home used in the tutorial program. The ordinance was defeated after UPAB (WEPAB became United Parents Against Busing before adopting its present name) held a press conference prior to the vote and threatened to label every council member who voted for the legislation as a pro-buser.

There was substantial political infighting as the group emerged into media prominence. Early in the fall of 1978 a boycott was planned by other anti-busing groups. Over half of the UPAB Board of Directors at that time supported the boycott. Opposed to the boycott because of violence that might result, co-leaders Gould and Henenberg, along with two other members, asked the four supporting

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*The new name has broader appeal and less stigma, not only to parents who don't want their children bused but to parents who may not be affected by busing, yet are dissatisfied with public schooling.

Reasons given for choosing the Home Tutorial Program included "better education," low student/tutor ratio, and proximity to one's home. But the researchers concluded that race and socioeconomic level were also factors.

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the boycott to leave the group. It was at this time, according to Gould, that "looking for an inexpensive, peaceful alternative to busing, our group became interested in the home tutorial concept. By August 1978 we had organized all the small home tutorial programs under one umbrella organization: UPAB."

Organizing for Home Tutorials

As noted, the Home Tutorial Program currently has four executive board members. Gould, as president, is responsible for coordination and public relations. Cohen, also an instructor in the program, is teacher coordinator, responsible for recruiting and screening teacher/tutors. Martin, another instructor, is parent coordinator. She, along with six area coordinators, assigns students to tutorial groups in the south San Fernando Valley. Nussbaum, father of one of the children in the program, is also a parent coordinator and assumes the same placement tasks for the north San Fernando Valley. Although they control operation of the Home Tutorial Program, these board members depend on parent volunteers to do much of the routine administrative and secretarial work.

The board conducts an advertising campaign each summer, using local newspapers and radio. Leaflets are distributed at supermarkets and other business places, at social and cultural events, and at anti-busing rallies. In addition, board members attend Los Angeles Unified School District (LAUSD) integration meetings and raise questions about the effects of desegregation in general and forced busing in particular. Despite all the public visibility, most parents become aware of the program by talking with friends, relatives, or parents who have had children enrolled.

After parents have enrolled a child, paying a $30 registration fee, the child is assigned by one of the area coordinators to a tutorial group. At this time parents are given names, addresses, and telephone numbers of other parents who have children in their tutorial group. Typically, a meeting of parents is scheduled shortly before the opening of the program in September to discuss these questions: What is the teacher to be paid? (Although $30 per week per child is suggested, the amount is negotiable.) Is the teacher to be paid weekly? Monthly? If the teacher is ill, will a substitute be called or will the session be canceled? If an illness occurs in the home being used for tutoring, will an alternate site be used temporarily, or will the session be canceled? Where will the group meet? In a parent's home? The teacher's home? Does the person whose home is used have insurance? Does the home meet health and safety standards? Do the parents want to enter into a verbal or a written contract with the teacher?

After answering these questions, the parent group must select one parent to act as a group coordinator (spokesperson and liaison) and another to act as group treasurer, collecting for the teacher's salary and handling other financial matters. Once the parents have reached consensus on working arrangements, they contact a parent group coordinator — either Martin or Nussbaum — to obtain a teacher. As soon as the name and phone number of a teacher are made available, the group schedules a meeting with that person.

The 58 teachers employed last year generally sought the work as "supplemental income." A few were tired of what they described as "stress" in public schools. A smaller number said they wished to participate because of philosophical opposition to forced busing.

As required by the California Education Code, all the teachers possessed a state teaching credential valid for the grade taught. One-third of them held a bachelor's degree from either California State University, Northridge, or the University of California, Los Angeles. Another third held degrees from other California institutions. The remaining third had attended out-of-state institutions. None had received a master's degree. The average age was 35 years, with a range from 23 to 60. The majority of teachers had taught for at least eight years, mostly in the public schools.

Teachers selected for the program completed a number of forms not usually required of public school teachers. They had to complete a portion of LAUSD Form 31.123, "Request for Exemption of Pupil Because of Instruction by Tutor." They also submitted Form 32.124, "Pupil Tutor Report," to the district pupils' services and attendance office for a record of hours met, location of the instructional setting, etc. This form must be resubmitted when a child reenrolls in the public school system, at the end of each semester, when tutoring is terminated, or when tutor assignments are changed.

The Home Tutorial Board has outlined matters to be discussed at the initial teacher/parent meeting: teacher salary; functions of the treasurer, including mode of payment, frequency, and method of collection; scheduling (most teachers have one group during the morning and another during the afternoon); method of reporting student progress (most teachers and parents agree on the traditional six-week and semester-end report card); procedure for purchasing materials; responsibilities for the parent coordinator; and the contractual relationship with the teacher-tutor.

Total cost per child for the 10-month 1980-81 year will be about $1,300. Basic tuition charges are $30 per week per child. Book costs vary with grade level. In grades 4 through 6, the students pay between $30 and $70, in grades 7 and 8 between $40 and $75. Basic supplies (paper, pencils, art materials) cost about $14 per year. A $25 nonrefundable registration fee is charged as well. Table 1 compares costs among the Home Tutorial Program, public schools, and private schools in the area.

The Parents

Most parents who enrolled their children in the program were middle-class whites. Eighty-nine percent of the parents surveyed said they and their children were white. The rest were Hispanic, 2.2%; Asian, 2.2%; Native American, 1.3%; black, 0.9%; and other, 4%. Expansion of the program in 1980-81 to the Hispanic and black communities of Los Angeles will alter these figures. In most cases both parents lived in the home (82%) and both were employed (71%). The income range for the parent group was generally from $25,000 per year to over $75,000. Most combined incomes fell between $30,000 and $45,000.

Most parents indicated they had received a high school diploma (96%). Forty-three percent said they had not pursued any education after high school. Twelve percent said they had completed work at a technical or trade school. Thirty-one percent said they had taken some coursework in college but had not graduated. Ten percent said they had a bachelor's degree, 3% a master's, and 1% a doctorate.

When asked why they chose to enroll their children in the Home Tutorial Program, respondents gave these reasons, in order of priority: 1) my child will get a better education, 2) citizens as taxpayers have a right to choose the schools their children attend, 3) the tutoring program has a small student/tutor ratio, and 4) the tutoring program is close to home. These results were obtained from a "Parent

Achievement advantages for home tutorial students should be interpreted very cautiously, for they do not take into account socioeconomic and background differences.

Choice-Making Survey" sent to parents' homes.

Telephone interviews, used to validate data received from the survey, brought some of these results into question. We had suspected, and thus were not surprised to discover, that when parents were allowed to talk freely about their reasons for selecting the Home Tutorial Program, other concerns appeared more important. Every parent interviewed expressed negative feelings toward busing. Typically included were concern over the safety of the buses and time spent on them, distance to the school, and difficulty in picking up the child if ill or hurt at school. Although race was never noted explicitly as an issue, parents alluded to the idea that children should attend a school where they are with friends who live in their neighborhood. Putting this together with the fact that 93% of the parents said that they lived in white neighborhoods, one can conclude that either race or socioeconomic factors (or both) are important to these respondents.

The level of parent satisfaction with the Home Tutorial Program was high. When asked, "How satisfied are you with the kind of education your child can get in the tutoring program?," 84% responded, "Very satisfied." Fourteen percent said they were "somewhat satisfied." Only 2% said they were "somewhat dissatisfied." Was it likely that the tutorial program gave children a better chance than the public schools of providing the kind of education parents want? Some 87% of the parents said the chances were "better" in the tutorial program. Six percent said the chances were "the same." Seven percent viewed them as "not as good."

The Learning Environment

We used teacher surveys along with observations and interviews to describe the learning environment in the Home Tutorial Program. Tutoring groups met in parents' homes. In most cases a family room or living room was set up with a table surrounded by chairs. Most teachers favored a circular arrangement. Maps, books, games, and other supplemental materials were housed in the area.

For instruction, teachers relied almost exclusively on state-adopted texts and workbooks. Some teacher-made materials were used as supplements. Small-group instruction was used nearly 50% of the time. Approximately 30% of instructional time was spent in interactions between a teacher and one student. Fifteen percent of the time was devoted to large-group instruction. Only about 5% of school time was organized for students to work by themselves. Films were rarely shown. Field trips were taken once a month by a few teachers, but for the most part were as rare as films.

Table 1. Cost Comparisons Among Los Angeles Unified School District, a San Fernando Valley Private School, And the Home Tutorial Program (1979-80)

Factor	LAUSD	San Fernando Valley Private	Home Tutorial Program
Teacher Salary**	$2,091 per month,* plus $153 per month for insurance	$900 per month; no insurance	$1,200 per month; no insurance
Per-Child Cost (ADA)	$1,910 (not including food and community services); $2,152 (including specially funded programs)	$1,800 per child (computed at $180 per month)	$1,200 per year (computed at $120 per month)
Teacher/Pupil Ratio	27 to 1 (grades 4-8); excludes aides six hours per day	27 to 1; excludes parent volunteers six hours per day	6 to 1, three to six hours per day
Books and Supplies	$65 per year	$90 per year	$50 per year for books, $10 per year for supplies
Fees	NA	$20 to $100	$25

*Does not include 8% from district to match state contribution to retirement fund.

**Teachers in all three situations teach six hours per day. Monthly costs are based on a 10-month school year.

In grades 4-6 nearly 40% of the time was devoted to mathematics, 10% to spelling, 20% to language arts (grammar, punctuation, capitalization), 10% to reading, 15% to science and social studies, and the remainder to physical education, art, and music. Few teachers worked consistently in the latter three areas. Only two said they provided foreign language experiences. In grades 7-8 a similar percentage of time was devoted to instruction in subject areas. Again, the greatest emphasis was placed on mathematics — nearly 45% of the time. More time was placed on reading than in earlier grades, 15%. More time was also devoted to science and social studies, 20%. Little attention was paid to physical education, art, and music.

While there were approximately 68 tutoring groups operating last year, they were organized in a similar fashion and used a fairly common curriculum. They looked like "mini" regular schools with the administrative bureaucracy removed, a halved time allotment, and no lunch. The curriculum was much like that found in the public schools. The children were like their neighborhood friends attending public schools. And, as in the public schools, parents were promised that their children would achieve well in basic skill areas — at least in reading, language, and mathematics — and would be given positive socialization experiences.

What About Achievement?

We had hoped to secure achievement data from LAUSD, using the California Tests of Basic Skills (CTBS)[1] in reading and mathematics in order to compare equivalent public school children with those in the tutoring groups. Several problems made the effort difficult. First, there were time differences in testing. The tutorial group pretest occurred in October. The district groups were tested in April only — the preceding April tests serving as "pretest" results. Second, only students receiving Title I funds are tested every year. As a result, only posttest scores were available for grades 5 and 8. Nonetheless, raw scores and percentiles were gathered for the district, and for geographic areas 9 and 10, both of which are located in the San Fernando Valley. Data from tests in reading and mathematics are shown in Table 2. It should be

Table 2. Comparison of CTBS Reading and Arithmetic Results: Los Angeles Unified School District and the Home Tutorial Program

Grade	District		Area 9		Area 10		Home Tutorial	
	Mean Raw Score	%ile	Mean Raw Score	%ile	Mean Raw Score	%ile	Mean Raw Score	%ile
Reading, 1980								
5	43.7	37	48.1	44	51.4	48	55.3	54.3
8	50.8	40	54.0	44	58.7	51	64.5	59.5
Arithmetic, 1980								
5	57.7	44	60.8	48	63.3	51	64.0	52.0
8	58.9	47	59.9	48	68.7	55	76.2	62.2

emphasized that these results are merely *suggestive* because of socioeconomic and background differences among students. These data should be interpreted very cautiously.

Our inability to make accurate comparisons between public school children and children in the tutoring groups did not discourage us. Recent research studies have revealed a positive relationship between achievement and circular instructional arrangements for small groups (the arrangement used primarily by teachers in the Home Tutorial Program)[2] and between small class size and achievement.[3] Therefore the outcome from testing children in the tutorial groups was intriguing.

Three of the CTBS tests were administered to 230 tutorial students in October and April: Form S, Level 2, to children in grades 4-6; Form S, Level 3, to children in grades 7-8, in reading (vocabulary and comprehension), language (spelling, mechanics, expression), and mathematics (computation, concepts, application). Pre- to posttest mean scale scores and gains along with t values are reported for the composite tests in Table 3. These results suggest that the tutoring group students performed well in all three academic areas and support the argument by Leonard Cahen and Nikola Filby that "on the average student achievement increases as class size is reduced, . . . the advantage ris[ing] sharply for classes of 15 and below."[4]

Socialization in the Program

The most often criticized area in the Home Tutorial Program was socialization. Parents, teachers, and even leaders of the program believed children were shortchanged by being in an instructional setting with five other peers rather than being exposed to a substantially larger number, as in the public schools. In fact, this belief became the major factor in the decision *not* to expand the program to grades 9-12.

Socialization is both mysterious and mystical. It is mysterious in the sense that parents tend to view socialization (the formation of values and beliefs through interaction with peers and adults in an institutional setting — church, school, civic organization) as an *unmeasurable* process. As one parent put it, "Socialization is maturation — physical, psychological, social, and intellectual — that happens so gradually you never are able to watch it." It is mystical in the sense that, while most adults view it as unmeasurable, they attach great value to it. As another parent told us, "I may not be able to tell you what socialization is, but I know it's important. And I know that education should encourage it."

In our study of the Home Tutorial Program we argued that socialization *could be measured.* We concluded that several forms of socialization occur in educational settings — the political, economic, and moral being most dominant traditionally. The schools have been intended to promote being a *good citizen in a democracy*, being a *producer and consumer in a capitalist society*, and being a *good person at home, work, and play.*

The Future-Oriented Role Expectations (FORE) Survey[5] was used to examine these three concepts: 1) self-concept (moral), 2) career orientation (economic), and 3) future orientation (political). An elementary school and a junior high school in the LAUSD were used for comparative purposes. The 72-item FORE instrument was administered to 140 children in the public schools and 294 children in the tutorial program in April as a posttest. Results for grades 4-6 showed that there were significant differences at the .05 level on t tests of means in favor of the tutorial students in the areas of self-concept and esteem (subscales of self-concept), future perspective (subscale of future orientation), and career adaptability (subscale of career orientation). Otherwise, there were no significant differences between the two groups. For grades 7-8, four subscales showed significant differences. This time the advantage appeared for the public school group in the areas of self-concept, esteem, future interests, and career adaptability.

Differences in the two groups can be explained in several ways. First, they were not as well matched as we desired. The grade 4-6 public school population was at least one-third Hispanic. Public school students at the secondary level were from higher-income families. These background differences may have accounted for differences in our results. But if we assume little influence from these background differences, the test results suggest that tutoring at grades 4-6 has valuable effects. On the other hand, there may be a greater need for large-group peer interaction as children move into adolescence.

Another way to examine socialization may be more difficult but more practical: Study the impact of participation in organizations. For many parents, socialization experiences are seen as event-, situation-, or organization-prompted. Therefore the lack of a chorus, band, football team, journalism club, or other organizations typically found in the public schools may be detrimental to children in the Home Tutorial Program.

This question invites discussion. First, one must recognize that similar organizations can be found in the community, such as Girl Scouts, Boy Scouts, YMCA, YWCA, city sports programs, church groups, and arts and crafts programs sponsored by small businesses. Such programs may be equal to, if not better than, similar programs in the schools, so long as parents can afford them and are willing to support their children's participation.

A more powerful argument in defense of socialization within the tutoring program relates to control over experiences in small groups. There is almost no way for six children in a confined home setting to

Table 3. Mean Scale Score Differences and t Values* For CTBS Totals in Reading, Language, and Mathematics

	Reading				Language				Mathematics			
Grade	Pre-	Post-	Diff.	t	Pre-	Post-	Diff.	t	Pre-	Post-	Diff.	t
4	413.7	460.5	46.8	7.0	405.7	457.4	51.7	5.0	357.3	406.5	49.2	8.4
5	437.4	477.2	39.8	9.3	438.9	475.6	36.7	8.0	398.6	443.7	45.1	8.3
6	496.7	528.9	32.2	7.4	476.5	506.3	29.7	5.7	449.2	493.0	43.8	9.5
7	550.2	565.5	15.3	3.8	495.6	534.7	39.1	5.6	487.0	532.7	45.7	5.4
8	563.4	591.9	28.5	4.8	527.0	562.0	34.9	6.9	529.3	560.1	30.8	6.1
Totals	491.8	524.7	31.0	14.2	470.5	507.5	37.0	13.7	445.8	488.2	42.4	5.8

*t values were computed using raw scores. All t values were significant at the .05 level or greater.

gain access to and use drugs, alcohol, and tobacco. Violence and vandalism did not occur. Despite these arguments, parents remained convinced that their children were harmed in some ways by not having opportunities to participate in large-group activities found in public schools. Yet they did not feel so guilty as to take their children out of the tutoring program.

Conclusions

Out-of-school programs that succeed must be studied. They help us to think about what we ought to be doing. Such was the case in our study of the Home Tutorial Program.

To begin with, we must combat the depersonalization of public school classrooms. We found academics and socialization successful in small groups where people knew one another very well. An implication of this finding is that we should keep teachers and students together for longer periods of time. We believe this would lead to improvements in both achievement and discipline.

In the small-group tutorial program the infrequent cross-age groupings appeared to have some advantages. They suggest, for example, organizing settings where one-third of the students are seventh-graders, one-third eighth-graders, and one-third ninth-graders. In such a middle school arrangement, as recommended to (but not frequently used by) the tutorial program, older students would tend to celebrate successes of younger ones and show concern for their problems and failures. Keeping students together for longer periods of time and placing younger and older students together may save substantial amounts of time: No six-week adjustment period is necessary each year to get to know "new" students. When people know one another well, the need for game playing in discipline might disappear.

Finally, achievement results for children in the Home Tutorial Program were encouraging, if not startling. We are convinced by our research and our intuition that the smaller the group, the better the potential for achievement. More important, perhaps, social expectations are changed when the teacher knows each student as a person rather than as one of 26 children who comes into a room for an hour each day.

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1. *California Tests of Basic Skills*, Form S, Levels 2 and 3 (Monterrey, Calif.: McGraw-Hill, 1979).
2. Shlomo Sharan and Yael Sharan, *Small Group Teaching* (Englewood Cliffs, N.J.: Educational Technology Publications, 1976).
3. Leonard S. Cahen and Nikola N. Filby, "The Class Size/Achievement Issue: New Evidence and a Research Plan," *Phi Delta Kappan*, March 1979, pp. 492-95.
4. Ibid., p. 492.
5. *Future-Oriented Role Expectations (FORE) Survey* (Los Angeles: Educational Design and Development Associates, 1978).

Decentralization and Community Participation Policy of Big School Systems

by Allan C. Ornstein

The decentralization process is very much alive today. Here Mr. Ornstein updates a landmark study published in 1973.

In 1973 I conducted a nationwide survey of administrative decentralization and community participation among school systems enrolling 50,000 or more students.* Data on some 65 out of 77 school systems in that group (84% return rate) were reported. Of the 65 school systems, 39 had decentralized (60%) and eight were considering it. All 65 systems had some form of community participation; New York City and Detroit reported community control at the decentralized level.

I conducted a follow-up study this year. The number of school systems with 50,000 or more students had decreased to 69; data were obtained from 66 (96%) of them. As shown in Table 1, 42 out of 66 (67%) reported that they were decentralized, six of them since 1973: Washington, D.C.; Jefferson County, Ky.; Duval County, Ga.; Charlotte-Mecklenburg County, N.C.; Mobile County, Ala.; and Tucson, Ariz. Three systems — Anne Arundel County, Md.; Milwaukee; and Pittsburgh — had moved from decentralization to centralization. In addition, 18 school systems had enacted a decentralization policy that modified an existing plan within the last seven years. Four made such modifications in 1980.

As the 1973 survey showed, larger school systems have decentralized more than smaller ones. In 1980, for example, 20 out of 22 (91%) of the school systems enrolling 100,000 or more students had decentralized, whereas only 22 out of 44 (50%) of the school systems enrolling 50,000 to 99,999 students had done so. School systems with predominantly minority student enrollments (50% or more) were more often decentralized. For example, 27 school systems were predominantly minority and 39 were predominantly white. As many as 82% of the predominantly minority school systems reported decentralization, compared to 51% of the latter. The setting — whether city, suburban, or "no predominant setting" (usually county) — apparently had no bearing on whether a school system is decentralized.

The 1980 decentralized unit names were largely confined to three terms: Twenty-eight referred to areas (67% adjusted percentage); seven to districts (17%), including community districts and subdistricts; and six referred to regions (14%). One school system (2%) used the term "zone." Such terms as "clusters," "complexes," "pyramids," and "units" were no longer a part of the decentralization vocabulary as they were seven years ago.

The number of decentralized units varied from as few as two areas in Oakland and Portland to as many as 32 com-

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*Allan C. Ornstein, "Administrative/Community Organization of Metropolitan Schools," *Phi Delta Kappan*, June 1973, pp. 668-74.

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munity districts in New York City, with four decentralized units the most frequent plan in 14 school systems (33% adjusted percentage) and three units second most frequent in 10 school systems (24%). The number of decentralized units averaged 5.6, with larger school systems (100,000-plus students) averaging 7.7 and smaller ones (fewer than 100,000 students) averaging 3.9. In 1973 the range of decentralized units was similar: The average was 5.5 decentralized units and the mode was three. Since 1973, 15 school systems have decreased their number of decentralized units, largely reflecting declining student enrollments, but four have increased the number.

The approximate range of students per decentralized unit varied from as low as 6,000 students in St. Louis to as many as 110,000 in Puerto Rico. The variation was greater in 1973, from as low as 2,500 in Milwaukee (no longer decentralized) to as high as 216,000 in Chicago. As a point of further comparison, the most frequent range of students per decentralized unit was between 11,000 and 30,000 students — more than 70% of all school systems falling in this range. In 1973 the most frequent (46%) size was between 15,000 and 25,000. In any event, these ranges are supposed to represent the proper size to carry out administrative functions with relative efficiency and sufficient resources.

The average number of students per decentralized unit was 25,500, with the mode falling at 20,000. As expected, larger school systems (100,000-plus students) had a higher average, 33,000, and a mode of 26,000. For smaller school systems (fewer than 100,000 students), the average was 19,000 students per decentralized unit; the mode was also 19,000.

Table 2 reports the reasons for decentralization. Respondents could choose from 17 reasons and could check as many as were appropriate for their respective school system. The top eight reasons were to: 1) enhance school/community relations, 2) provide greater community input at the local school level, 3) provide local schools with more field and resource personnel, 4) provide more efficient maintenance and support of local schools, 5) reduce administrative span of control, 6) provide greater linkages between the local and central school boards, 7) redirect spending for local school needs, and 8) provide greater curriculum continuity. These reasons accounted for 79% of the total responses; in general, they focus on school/community relations, local school needs, administrative organization, and curriculum matters.

Not shown in the table was a consistent trend toward certain relationships (.01 significance level or stronger). City school systems focused on redirecting spending for local schools, greater curriculum continuity, student participation, and school desegregation. County (no predominant

Table 1. Decentralized School Systems with 50,000 or More Students, 1980

School System	Student Enrollment, 1980	Decentralized Unit Number	Decentralized Unit Name	Students per Decentralized Unit Range	Students per Decentralized Unit Average
New York City[a]	962,000	32	Community District	12,000-30,000	19,000[e]
Puerto Rico[a]	721,000	7	Educational Regions	90,000-110,000	103,000
Los Angeles	545,000	10	Areas	42,500-65,000	54,500
Chicago	475,000	20	Districts	15,000-30,000	24,000
Philadelphia	235,000	8	Districts	17,000-40,000	30,000
Dade Co., Fla.	226,000	4	Areas	40,000-80,000	56,000
Detroit[a]	216,500	8	Regions	8,000-36,000	27,000
Houston	194,000	6	Areas	30,000-36,000	32,500
Hawaii	168,500	7	Districts	7,500-41,000	24,000
Baltimore City	136,000	6	Regions	20,000-25,000	22,500
Broward Co., Fla.	135,500	4	Areas	27,500-41,500	34,000
Dallas	130,500	6	Subdistricts	20,500-27,500	22,000
Fairfax Co., Va.	127,500	4	Areas	30,000-34,500	32,000
Prince George's Co., Md.	127,000	3	Areas	36,000-46,000	42,500
Memphis[a]	113,500	4	Areas	23,500-31,500	28,500
Washington, D.C.[b]	106,000	6	Regions	12,000-25,000	17,500
Jefferson Co., Ky.[b]	103,500	4	Regions	20,000-30,000	26,000
Baltimore Co., Md.	102,500	5	Areas	19,500-28,000	20,500
Duval Co., Fla.[b]	102,000	4	Areas	22,500-30,000	25,500
Montgomery Co., Md.	102,000	5	Areas	18,000-26,000	20,500
New Orleans	87,000	4	Districts	18,500-25,500	21,500
Albuquerque	81,000	3	Areas	23,500-29,000	27,000
Jefferson Co., Colo.	81,000	4	Areas	19,000-24,000	20,500
DeKalb Co., Ga.	78,000	3	Areas	23,000-29,000	26,000
Charlotte-Mecklenburg Co., N.C.[b]	76,000	8	Areas	7,500-12,000	9,500
Palm Beach Co., Fla.	73,000	5	Areas	14,000-20,000	14,500
Atlanta	72,000	3	Areas	21,500-27,000	24,000
Nashville-Davidson Co., Tenn.	71,500	3	Districts	16,500-27,000	24,000
St. Louis	66,000	4	Areas	6,000-20,500	16,500
Mobile Co., Ala.[b]	63,500	4	Areas	13,000-18,000	16,000
San Antonio	62,000	3	Areas	16,000-24,000	20,500
El Paso	60,000	3	Areas	17,500-23,000	20,000
Polk Co., Fla.	60,000	4	Areas	9,000-23,000	15,000
Granite, Ut.	59,500	3	Areas	18,000-24,000	20,000
San Francisco	58,500	4	Areas	11,000-16,000	14,500
Tucson[b]	56,500	4	Regions	11,500-17,000	14,000
Cincinnati	55,500	4	Areas[c]	10,500-15,500	13,500
Portland[a]	53,500	2	Areas	23,500-28,500	26,500
Greenville Co., S.C.	53,000	5	Areas	9,500-13,000	10,500
Seattle	50,500	3	Zones	15,000-19,000	17,000
Oakland	50,000	2	Areas[d]	23,000-26,000	25,000
Brevard Co., Fla.	50,000	3	Areas	9,000-22,000	16,500

Schools not decentralized: Over 100,000 students, Hillsborough Co., Fla.; San Diego. Over 75,000 students, Cleveland; Milwaukee; Pinellas Co., Fla.; Clark Co., Nev.; Orange Co., Fla.; Columbus. Over 50,000 students, Anne Arundel Co., Md.; Indianapolis; Fort Worth; Denver; Jefferson Parish, La.; E. Baton Rouge Parish, La.; Newark; Austin; Virginia Beach, Va.; Cobb Co., Ga.; Tulsa; Jefferson Co., Ala.; Buffalo; Birmingham; Pittsburgh; San Juan, Calif.

a = School board operating at the decentralized level
b = Decentralized since 1973
c = Previously called districts
d = Previously called regions
e = Decentralization limited to elementary and junior high schools

setting) schools were concerned with redirecting spending for local schools.

All 66 school systems reported some form of community participation at the local and central levels, and the 42 decentralized school systems also reported the extent of community participation at the decentralized level. On a scale of one to four — with one representing minimal, two representing average, three representing extensive, and four very extensive or community control — the following results were observed and are shown in Table 3:

At the local level, three school systems (4.5%) reported minimal participation, 23 (35%) reported average participation, and 40 (61%) reported extensive participation. The average community participation score was 2.6. At the decentralized level, four school systems (9.5%) indicated minimal participation, 21 (50%) indicated average participation, and 17 (40.5%) indicated extensive participation. The average community participation score was 2.3. At the central or systemwide level, the figures were three (4.5%) reporting minimal participation, 32 (48.5%) reporting average participation, and 31 (47%) reporting extensive participation. The average score was 2.4. At all three school levels — local, decentralized, and central — community participation averaged out in rather similar fashion, although local school scores were somewhat higher. No school system reported very extensive community participation, which was defined as community control on any level.

Although not shown in Table 3, this relationship existed (at the .10 significance level or stronger): Larger school systems (100,000-plus students) reported higher community participation scores than smaller ones, as did suburban school systems at the local school level when compared to city and county school systems.

Only five school systems reported school boards operating at the decentralized level, and four of them were school systems with over 100,000 students and predominantly minority enrollment: New York City, Puerto Rico, Detroit, and Memphis. These four decentralized school boards were also elected by the communities. The Portland school system reported the other decentralized school board, and it was an appointed one.

All 66 school systems had central school boards, 83% of them elected. The smaller school systems (fewer than 100,000 students) had a greater percentage of elected school boards (89%) than the large school systems (73%). County school systems (87.5%) tended to have more elected school boards than city (84%) and suburban (77%) school systems. In the case of an appointed school board, the mayor of the city or a governmental agency such as a council or board of supervisors elected the school board. In two suburban cases the governor appointed the school board.

In summary, the decentralization process is very much alive today. Not only was a greater percentage of school systems with 50,000 or more students decentralized in 1980 than in 1973, but 18 school systems also had modified existing decentralization policies within the last seven years.

Three basic decentralization terms predominated — areas, districts, and regions, with areas used in the majority of cases. The number of decentralization units varied from as low as two to a high of 32 units, with the number of students per decentralized unit averaging 25,500.

Several reasons were given for decentralization. Heading the list were: 1) to enhance school/community relations and 2) to provide greater input at the local school level.

Community participation was considered above average at all three levels — local, decentralized, and central. More than 80% of the school systems reported elected school boards at the central or systemwide level. ☐

Table 2. Reasons Given for Decentralizing (Responses N = 266)

Reasons	Frequency	Percentage of Responses	Percentage of School Systems
1. To enhance school/community relations	34	12.8	81
2. To provide greater community input at the local school level	33	12.4	78.6
3. To provide local schools with more field and resources personnel	29	10.9	69
4. To provide more efficient maintenance and support of the local schools	28	10.5	66.7
5. To reduce administrative span of control	25	9.4	59.5
6. To provide greater linkages between the local school and central board	21	7.9	50
7. To redirect spending for local school needs	20	7.5	47.6
8. To provide greater continuity of the K-12 curriculum	19	7.4	45.2
9. To reduce bureaucratic overlap or waste	13	4.9	31
10. To alleviate community pressure	10	3.6	23.8
11. To enhance student participation	8	3	19
12. To help desegregate the schools	6	2.3	14.3
13. To compensate for decreased student enrollments	4	1.5	9.5
14. To reduce spending	4	1.5	9.5
15. To compensate for increased student enrollments	3	1.1	7.1
16. To change the feeding patterns of elementary and secondary schools	3	1.1	7.1
17. To facilitate a merger with another school system	1	0.4	2.4
18. Other reasons	5	1.9	11.9

Table 3. Community Participation at Local School, Decentralized, and Central Levels

	Local		Decentralized		Central	
Extent	Freq.	Adj. Pct.	Freq.	Adj. Pct.	Freq.	Adj. Pct.
Minimal	3	4.5	4	9.5	3	4.5
Average	23	34.8	21	50	32	48.5
Extensive	40	60.6	17	40.5	31	47
Very Extensive	0	0	0	0	0	0
Totals	66		42		66	
Means	2.56		2.31		2.42	

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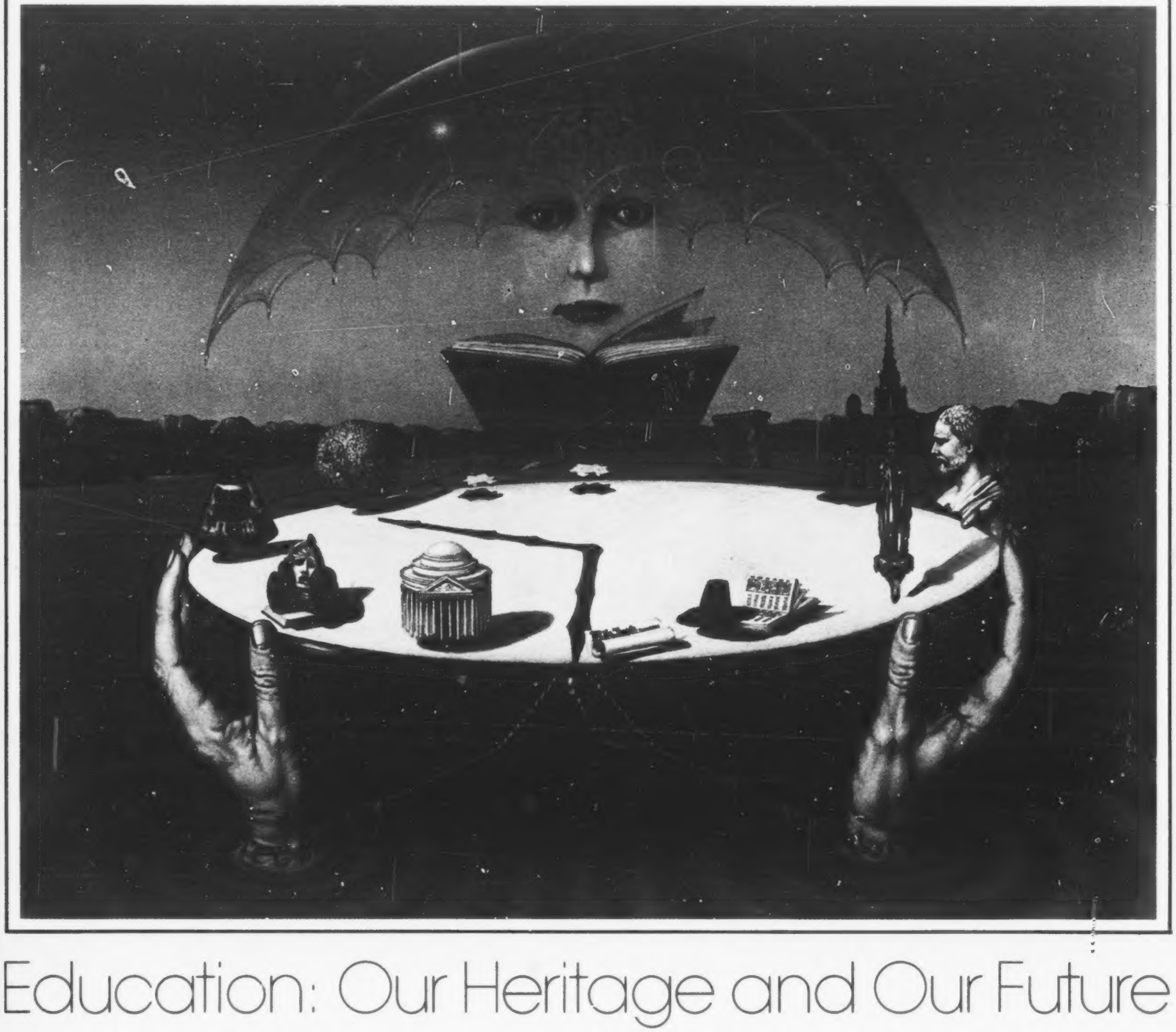

Education: Our Heritage and Our Future

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Notes on Educational, Occupational, and Economic Achievement in American Society

by William H. Sewell

The U.S. has made great strides in promoting equality of educational opportunity. However, blacks and women still lag in higher education, and there is still much room for improvement in occupational opportunity for people of modest socioeconomic origins.

In American society many different kinds of achievement are valued. However, I shall focus on only three broad areas of achievement: education, occupation, and income. Achievement in each of these areas is highly prized, and to varying degrees our society accepts responsibility for providing opportunities in all of them. Moreover, there are direct and indirect ways in which they are related. Certain levels of educational attainment are generally considered appropriate prerequisites for various occupations, and it is generally assumed that, in turn, income will depend in part on occupational attainment.

While generally positive, the correlation between educational, occupational, and economic achievements is far from perfect. As is well known, some occupations require high levels of educational attainment and are accorded high status but command relatively low economic rewards. Other occupations require little formal education and are accorded low status but may yield relatively high levels of income. Moreover, educational, occupational, and economic achievement are all related in varying degrees to other characteristics of the individual, including socioeconomic, racial, and geographic origins; sex, ability, motivation, and aspirations; and experiences in the home, school, community, and labor market. This is what makes research on factors in achievement in American society particularly difficult.

Educational Attainment

I shall examine educational attainment first. I do so not only because of the high value placed on educational attainment in our society and because of the instrumental role played by education in occupational and economic achievement, but also because education is an area in which Americans have made the greatest commitment to equality of opportunity.

We may examine educational attainment in any of several ways, but the one indicator that is most commonly used and understood is years of schooling completed. I shall use this measure and consider such statistics as median years of school completed and percentage of persons in given age cohorts completing various levels of formal education.

The educational attainment of the age cohort born about 75 years ago — near the time when Phi Delta Kappa was founded — was 8.7 years of schooling. Only 30% of the cohort graduated from high school. Thirteen percent completed at least one year of college and 7% graduated from college.[1] Contrast this with the experience of the age cohort born in 1950. Now age 30, they have attained a median of 12.9 years of schooling. Eighty-five percent of them graduated from high school, 47% completed one or more years of college, and 26% are college graduates. Although there has been steady improvement in the educational attainment of our population over the years, the past 40 have been the most dramatic. The most important gain has been in retention of children through high school graduation. The current 86% graduation rate for white school-aged children, according to many experts, is near the maximum yield attainable. Blacks have made great strides in recent years; currently over 75% of black children graduate from high school. Black youths of high school age are currently as likely to be enrolled in school as are white youths, regardless of sex or residence (the current enrollment rates for black and white population groups are within one percentage point of 89%).[2] Hence the gap between the races in percentages graduated from high school is likely to close in the Eighties.

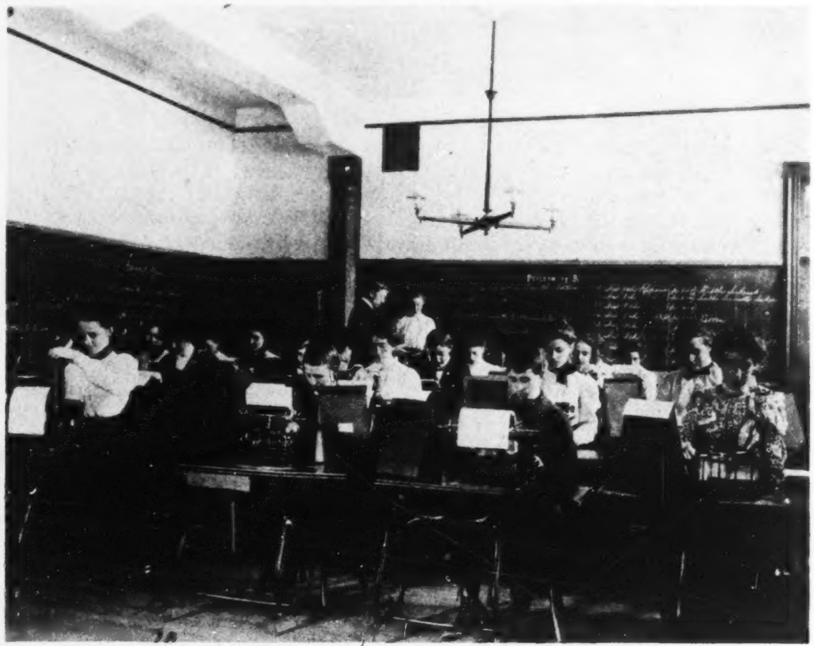
Over the years but particularly in the last two decades, women and blacks have made remarkable strides toward equality in the achievement of higher education. Forty-one percent of women in the 30-year age cohort have achieved at least one year of college, and 22% are college graduates; the corresponding figures for men are 53% and 30%. At present women are as likely to enter college as men, and, if their retention rates continue to improve, the gap between women and men will be closed early in the current decade.

The same trend holds for blacks, but the gaps are larger because of the lower likelihood of black youths graduating from high school and their lower college retention rates. Thirty-one percent of blacks in the 30-year age cohort have completed at least one year of college, and 13% are college graduates; corresponding figures for whites are 49% and 27%. With increased opportunities for higher education, we can expect blacks to make sizable gains; but the prospects for equality of achievement in higher education for blacks in the next decade are clearly less favorable than for women.

Today, too many academically qualified youths from lower socioeconomic backgrounds fail to continue their education after completion of high school. As has been true for at least 50 years, roughly half of any full cohort of high school graduates goes on to college. Those from lower socioeconomic backgrounds, regardless of race or sex, are still handicapped when it comes to college entry and completion, despite the government-sponsored programs designed to assist them.[3] The challenge of the Eighties is to further increase the opportunities for higher education for able but disadvantaged white and black youths of both sexes.

Occupational Achievement. Probably there is no single achievement that is more highly regarded by the general public in America than the attainment of a respected occupation. This is related to the fact that there is a strong tendency to identify personal excellence with occupational achievement. During the past century the U.S. and Canada have been transformed from basically agricultural-industrial societies to advanced industrial societies that are increasingly dependent upon bureaucratic occupations ranging from clerical and sales to technical, managerial, scientific, and professional positions. We are less dependent on farming and manual occupations. The bureaucratic occupations characteristically require high levels of education, ranging from high school graduation for most clerical positions to postgraduate and professional degrees for some technical and managerial occupations and most scientific and professional positions. The shift to an advanced-industrial society has been accompanied by an enormous increase in the number of high-status occupations requiring advanced training and education. This in turn has resulted in increased opportunities for able and determined youths of modest social origins to obtain the necessary education to qualify for high-prestige occupations — occupations that bring high social status in the community and the income necessary for the enjoyment of a desired life-style.

For over 50 years, sociologists have been documenting the fact that the competition for high-prestige occupations is not completely open; success depends heavily on the socioeconomic position of one's family of origin. Even the most recent studies of occupational mobility clearly demonstrate that, although there is a great deal of occupational mobility in our society, the occupation of the father is still an important determinant of the occupation of the son.[4] It is also known from research on social mobility that one of the most important mechanisms by which families influence the socioeconomic careers of their children is by socializing them to appropriate educational and occupational aspirations and by providing the requisite support for the achievement of these aspirations.[5]



Library of Congress, Courtesy O.L. Davis

A turn-of-the-century typing class in Washington, D.C.

Social scientists have recently sought to further understand the complex process by which children achieve their adult occupational status. In 1967 Peter Blau and Otis Duncan developed a causal model that used father's occupation, father's education, son's education, and son's first job to explain the son's current occupational status.[6] Stimulated by their success, my group at Wisconsin has sought to further explain the status attainment process by adding ability; grades; the encouragement of parents, teachers, and peers; and educational and occupational aspirations plus educational attainment as intervening variables between social background and occupational achievement. The resulting "Wisconsin Social Psychological Model of Status Attainment" has been widely used in studies of educational and occupational achievement in the U.S. and abroad.[7] Numerous applications of the model show that the socioeconomic status of the parents has little or no effect on high school grades independent of measured ability. Parents' socioeconomic status, however, does have strong effects on significant others' influences and on educational and occupational aspirations, and via these aspirations on educational and occupational achievements. The effects of the child's ability are somewhat different. Ability has strong effects on high school grades, independent of socioeconomic origins; it also has direct and indirect effects on significant others' influence and on educational and occupational aspirations. Through these mediating variables, ability affects educational attainment and subsequently occupational status. Educational attainment has the greatest effect on occupational achievement of any variable in the model. The model explains up to two-thirds of the variance in educational achievement and almost half of the variance in occupational attainment, as assessed by standardized indices of occupational prestige and socioeconomic status.

Many other interesting findings have resulted from the application of various forms of the Wisconsin model in the study of the status attainment process. I shall mention only three as they pertain to matters covered in this article:

1. The models work equally well in explaining the educational and early occupational achievements of either young men or young women. But later in the life cycle they become less efficient in explaining women's occupational achievements. We have preliminary evidence suggesting that this is because women aspire to, train for, and enter segregated occupations in which advancement is restricted; women are less likely to be given on-the-job training that would enable them to qualify for better jobs; women tend to be intermittent workers and, when they return to work, often have to take lower-status jobs than those they left; finally, women tend not to be promoted, whatever their qualifications, to the higher-status supervisory positions involving power and authority in the workplace.[8]

2. The models explain economic achievement as measured by earnings much less effectively than they explain occupational achievement. The importance of education in determining earnings is much less than educators have commonly assumed, but education still has significant effects, particularly through its influences on occupational attainment. We think the explanation of economic achievement will involve the development of new models that include a number of variables that intervene between formal educational attainment and income, such as years of working experience, on-the-job training, the characteristics of the labor market in which one works, and the industry and the type and size of firm in which one is employed — all of which have been shown to contribute to earnings differentials.[9]

3. With another variant of the Wisconsin model, we have also examined the effects of quality of college on socioeconomic achievement. Our results show that although those who attend prestigious colleges have significantly higher occupational and economic attainments than those attending lower-status institutions, most of this advantage is due to the characteristics of those who attended the high-status colleges rather than to the influence of characteristics of the college.[10]

As a result of research of this nature, commonly called "status attainment research," we are coming to have a more complete understanding of the complex factors that help to explain educational attainment in our society and of the important role that education plays in socioeconomic achievements — especially in occupational attainment. But there is considerable room for improvement in these models if we are to further explain dif-

". . .[W]ithout exception, the rule is this: the higher the education level, the higher the median annual income."

ferential rates of occupational and economic achievements. Researchers at Wisconsin and elsewhere are trying to develop new and improved models that more adequately take into account the influence of individual and structural factors in the explanation of achievement.

Economic Attainment

Economic success has always been highly valued in our society, of course. In fact, many Americans consider the achievement of wealth or a high income to be the most important of all attainments. This is not only because wealth and income are associated with economic and political power but also because it is commonly assumed that legitimately acquired wealth and income are measures of the ability, determination, and productivity of those who successfully compete for economic rewards. Yet it is also widely known that this economic competition is by no means equally open to all citizens. Wealth is legitimately passed on from one generation to another and parents make income transfers to their children. The role of government has never been to stop these transfers but only to reduce the gains from them through tax policies, with the result that they are still effective in maintaining family economic power. Moreover, as I have noted, families of high socioeconomic status seek to insure the economic status of their children by helping them to obtain the best possible education and occupation. The consequence of these and related facts is that American society is characterized by great economic inequality. I shall not present evidence to support this assertion, because it is generally accepted; voluminous research demonstrates the extent of economic inequality in the U.S.[11] I shall, however, examine briefly two aspects of economic inequality in our society: the inequality in income and earnings between blacks and whites and between men and women.

Table 1 is based on information collected in a national survey of full-time workers conducted by the U.S. Bureau of the Census in 1977.[12] From this table we may draw three very important conclusions regarding race and sex differences in income while controlling for education.

First, within each race and sex category, even though there are large race and sex differences in income, without exception the rule is this: the higher the educational level, the higher the median annual income. That the differences in annual income by education within each race and sex category are large is indicated by comparing the annual incomes of those at the extremes of the educational scale. Thus white men, who on average have the highest incomes, have median incomes under $10,000 if they have less than eight years of schooling, in contrast with approximately $22,000 if they have five or more years of college. And black women, who on average have the lowest incomes, have a median annual income of approximately $5,500 if they have less than eight years of schooling, in comparison with $13,600 if they have five or more years of college.

Second, it is apparent from the table that white men at all educational levels have larger mean annual incomes than black men. The discrepancies are greatest at the lower educational levels and least at the higher levels of education. Other evidence indicates that this has been true throughout the 1960-70 period, although the gap is being reduced and is currently quite small for blacks with higher education.[13] White women have somewhat higher annual incomes than black women at the lower educational levels, but at the higher levels of education the differences decrease and in some instances favor black women.

Table 1. Median Annual Income of Full-Time Workers by Education, Race, and Sex, 1977

Years of Education	All Men	White Men	Black Men	All Women	White Women	Black Women
Total	$15,082	$15,391	$10,607	$ 8,819	$ 8,874	$ 8,297
Elementary						
Less than eight yrs.	9,332	9,967	7,466	6,022	6,162	5,514
Eight yrs.	11,931	12,266	8,208	6,493	6,617	5,748
High school						
One to three yrs.	12,357	12,821	9,363	7,227	7,396	6,594
Four yrs.	14,408	14,786	10,821	8,462	8,493	8,185
College						
One to three yrs.	15,548	15,722	13,312	9,471	9,466	9,398
Four yrs.	19,016	19,329	13,334	11,134	11,040	12,049
Five yrs. or more	21,832	21,979	18,217	14,145	14,226	13,597

Third, income differentials between the sexes are much greater than between whites and blacks at every educational level. Thus if we compare women's and men's annual incomes by educational levels we find that men's incomes are $3,300 more than women's at the lowest educational level and that the difference increases regularly to nearly $8,000 for college graduates. Moreover, women's annual incomes are never more than 65% of those of men at any level of education. On the other hand, black men's annual income is never less than 67% of white men's income (for men with eight years of schooling) and ranges upward to 85% for those with a college education.

It would take considerably more space than I have available to explain these findings thoroughly. Consequently, I shall concentrate on the one finding that seems most enigmatic: the discrepancy between the earnings of men and women with the same levels of educational attainment. Recent research on this problem suggests several possible explanations that seem to have merit.[14] The first is that women who work on full-time jobs outside the home tend to be concentrated in traditionally female occupations where pay is relatively low. Second, not only do the occupations women enter tend to pay less than those men enter, but the more an occupation is dominated by women the less it pays. Third, women are more likely than men to be employed by low-paying firms. Fourth, there are still instances of women being paid less than men doing the same work. Finally, women have less commitment to the labor market than men; hence they are willing to take jobs that pay less or provide less chance for advancement. (Analogues of the first three of these reasons are equally valid for blacks.)

No study has attempted to assess the importance of all of these factors in explaining the earnings gap between employed men and women. The major reason for this hiatus is lack of basic data; it would be extremely costly to design and carry out a survey to provide the necessary information. A number of studies have examined one or more of the explanations I have offered.[15] Each of the factors has been shown to make some contribution to explaining the earnings gap between the sexes, but no study, to my knowledge — including those that examine the influence of such individual characteristics as education, occupation, labor-force commitment, and labor-force experience — can account for as much as 50% of the gap. Studies that take into account such institutional aspects as job segregation, size and type of firm, and type of labor market also explain only a small portion of the earnings differences between men and women. From all the evidence available to date, it appears that women are systematically and seriously underpaid. The amount of this underpayment that is due to discrimination is very difficult to determine, because of the problems inherent in identifying and assessing the factors that account for the earnings differences.

Remedies for unequal earnings are not easily put into action. From experiences to date, it appears that the legal requirement of equal pay for the same job will take a long time to become fully effective. Equal access to all occupational opportunities will at best work quite slowly, because those now in the labor market cannot easily shift to jobs that require skills for which they are not trained. The use of job evaluation procedures to equalize pay for jobs requiring equal qualifications would probably further help to eliminate pay differentials between male and female workers in the same firm.[16] (Of course, all of these remedies would be equally effective in reducing differences in the pay of black and white workers.)

As I have shown, the U.S. has made great strides in promoting equality of educational opportunity, although there are still gains to be made in higher education by women and blacks. There is still considerable room for improvement in occupational opportunity for those from modest socioeconomic origins, whether women or men or blacks or whites, but progress is being made. The greatest challenge of the future, however, is to close the gap between the earnings of females and males and between blacks and whites — gaps that are not based on differences in educational attainment between the sexes or the races but on many subtle factors, including differences in socialization to educational and occupational expectations and the operation of labor markets that tend to reinforce past discrimination.

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1. The figures on educational attainment are based on information from the U.S. Bureau of the Census, *Educational Attainment in the United States: March 1976 and 1977*, Current Population Reports, Series P-20, No. 314 (Washington, D.C.: U.S. Government Printing Office, December 1977).

2. Enrollment data are from the U.S. Bureau of the Census, *School Enrollment — Social and Economic Characteristics of Students*, Current Population Reports, Series P-20, No. 346 (Washington, D.C.: U.S. Government Printing Office, October 1979).

3. Larry E. Sutter, "Elementary and Secondary School Progression, High School Graduation, and College Entrance of the American Population," in Alan C. Kerckhoff, ed., *Research in Sociology of Education and Socialization* (Greenwich, Conn.: JAI Press, 1980), pp. 1-30.

4. See especially Pitirim Sorokin, *Social Mobility* (New York: Harper and Brothers, 1927); Peter M. Blau and Otis D. Duncan, *The American Occupational Structure* (New York: John Wiley and Sons, 1967); and David L. Featherman and Robert M. Hauser, *Opportunity and Change* (New York: Academic Press, 1978).

5. William H. Sewell and Vimal P. Shah, "Socioeconomic Status, Intelligence, and the Attainment of Higher Education," *Sociology of Education*, Winter 1967, pp. 1-23.

6. Blau and Duncan, op. cit., pp. 165-77.

7. William H. Sewell, Archibald O. Haller, and Alejandro Portes, "The Educational and Early Occupational Status Attainment Process," *American Sociological Review*, February 1969, pp. 82-92; and William H. Sewell, Archibald O. Haller, and George W. Ohlendorf, "The Educational and Early Occupational Attainment Process: Replication and Revision," *American Sociological Review*, December 1970, pp. 1014-27.

8. William H. Sewell, Robert M. Hauser, and Wendy C. Wolf, "Sex, Schooling, and Occupational Status," *American Journal of Sociology*, November 1980.

9. William H. Sewell and Robert M. Hauser, *Education, Occupation, and Earnings: Achievement in the Early Career* (New York: Academic Press, 1975).

10. Duane F. Alwin, "Socioeconomic Background, Colleges, and Post-Collegiate Achievements," in William H. Sewell, Robert M. Hauser, and David L. Featherman, eds., *Schooling and Achievement in American Society* (New York: Academic Press, 1976), pp. 343-72. For influence of high schools, see Sewell, Hauser, and Alwin, "High School Effects on Achievement," ibid., pp. 309-42.

11. See especially Herman P. Miller, "Is the Income Gap Closing? 'No!'," in Harold L. Sheppard, ed., *Poverty and Wealth in America* (Chicago: Quadrangle Books, 1975).

12. U.S. Bureau of the Census, *Money Income in 1977 of Families and Persons in the United States*, Current Population Reports, Series P-60, No. 118 (Washington, D.C.: U.S. Government Printing Office, 1979).

13. James A. Sweet, "Recent Trends in the Economic Conditions of Young Married Couples in the United States," Working Paper #79-42, and "Recent Trends in the Size and Composition of Income of Young Black Couples, 1960-76," Working Paper #80-10 (Madison, Wisc.: University of Wisconsin Center for Demography and Ecology, 1979 and 1980).

14. Robert Bibb and William H. Form, "The Effects of Industrial, Occupational, and Sex Stratification on Wages in Blue-Collar Markets," *Social Forces*, June 1977, pp. 974-86; Francine D. Blau, *Equal Pay in the Office* (Lexington, Mass.: Lexington Books, 1977); and Donald J. Treiman and Kermit Terrell, "Women, Work, and Wages," in Kenneth C. Land and Seymour Spilerman, eds., *Social Indicator Models* (New York: Russell Sage Foundation, 1975).

15. Mary Corcoran and Gregory J. Duncan, "Work History, Labor Force Attachment, and Earnings Differences Between the Races and the Sexes," *Journal of Human Resources*, Winter 1979, pp. 3-20; Jacob Mincer and Solomon W. Polacheck, "Family Investment in Human Capital: Earnings of Women," *Journal of Political Economy*, March/April 1974, Part II, pp. S76-S108; and "Women's Earnings Reexamined," *Journal of Human Resources*, Winter 1976, pp. 118-34.

16. Donald J. Treiman, *Job Evaluation: An Analytical Review* (an interim report) (Washington, D.C.: National Academy of Sciences, 1979). ☐

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Sewell's longitudinal study of social and economic factors in educational and occupational aspirations and attitudes followed the careers of over 9,000 males and females who were graduated from Wisconsin high schools in 1957. It broke new ground and is already considered a classic.

Among curriculum authorities who were consulted by Harold Shane in the preparation of his "significant writings" article (page 311) were*:

William Alexander, Vernon E. Anderson, Michael W. Apple, Patrick Babin, Roger V. Bennett, Louise M. Berman, Leslee Bishop, Joseph Anthony Bosco, Janet S. Branch, Robert L. Buser, Arthur Costa, O. L. Davis, Jr., Stanley Dimond, Russell Dobson, Prudence Dyer, Samuel Everett, Stephen M. Fain, Gerald R. Firth, Robert Fleming, Jack R. Fraenkel, Jack R. Frymier, Charles Gengler, and Gary A. Griffen.

Paul R. Hanna, Earl W. Harmer, Richard Hart, C. Glen Hass, Phyllis M. Henry, Richard E. Hodges, Arthur Hoppe, Phil Hosford, Dorothy Huenecke, Marie Hughes, Jay John Jelinek, Richard D. Kimpston, Nancy R. King, Darrell F. Kirby, Frances Klein, Herbert M. Kliebard, Paul R. Klohr, Richard Kunkel, Victor Lawhead, Marcella Lawler, Jerome E. Leavitt, Dorris M. Lee, J. Murray Lee, Joe Leese, and Arthur J. Lewis.

Wilma S. Longstreet, William T. Lowe, Virginia M. Macagnoni, James E. MacDonald, Gordon N. MacKenzie, Robert M. McClure, James McElhinney, Robert McKean, John M. Mickelson, Alice Miel, Alex Molnar, James O'Hanlon, Karl Openshaw, Carlos J. Ovando, Norman V. Overly, A. Harry Passow, James A. Phillips, Jr., Dennis A. Pickering, Gerald Ponder, Jerald L. Reece, Ted D. Rice, Peggy Miller Riethmiller, Jessie A. Roderick, and Frederick A. Rodgers.

Louis J. Rubin, J. Galen Saylor, Steven Selden, J. Harlan Shores, Edmund C. Short, Delores Silva, Bunnie Othanel Smith, Bernard Spodek, Charles R. Stoughton, A. W. Sturges, Harriet Talmage, Laurel Tanner, Bob L. Taylor, Jay C. Thompson, David T. Turney, William Van Til, Gordon Vars, Tom C. Venable, and Hugh B. Wood.

*Several persons who returned Mr. Shane's opinionnaire neglected to sign their names. We regret that they could not be included in the above list. — *The Editor.*

Indian Education: Accomplishments Of the Last Decade

by Robert J. Havighurst

Native Americans are at last gaining control of their economic and cultural destiny. Education has played an important role in this development.

In this century two diverse and competing approaches have affected the education of American Indians. One is the assimilation of Indians into Anglo society. The other is the self-determination by the separate Indian tribes and communities of the education of their own children, based on tribal culture and tradition. These two approaches are not now as divergent as they were in earlier decades, because social and economic developments in the U.S. are forcing greater interaction of the Native American with Anglo society, under the banner of self-determination.

The decade of the 1970s witnessed major achievement in the area of self-determination by Native Americans of the structure and content of their education system. The stage was set in the 1960s. In 1966 President Lyndon Johnson appointed a White House Task Force on Indian Affairs. At that time Sen. George McGovern (D-S.D.) introduced a concurrent resolution in Congress that emphasized Indian self-determination and economic development. In March 1968 Johnson sent a message to Congress on Indian affairs stressing the federal government's policy of supporting a stronger Indian voice in Indian affairs, directing the Bureau of Indian Affairs (BIA) to establish school boards at all federal schools, and creating a National Commission on Indian Opportunity composed of Indian leaders.

The almost complete official acceptance of a policy of self-determination was laid out in the President's message to Congress on 8 July 1970, which says in part, "It is long past time that the Indian policies of the federal government began to recognize and build upon the capacities and insights of the Indian people." The main points of Johnson's message are:

- Indian tribes should have self-determination over their own affairs without termination of their reservation status and their tribal unity. Indian tribes should have the right to control and operate federal programs, including schools.
- The federal government should assist financially in projects for the economic development of Indian groups.
- A substantial increase in funding of the U.S. Public Health Service for Indians should be made.
- Assistance to urban Indians through the operation of service centers in major cities should be encouraged.

The commissioners of Indian affairs who directed the BIA under Johnson and his successors were for the first time Indians: Robert Bennett, a member of the Oneida tribe; Louis R. Bruce, Mohawk-Sioux; Morris Thompson, Athabascan (Alaska); and Forrest Gerrard, Blackfeet.

In 1978 there were about 275,000 Native Americans in the U.S. (including Aleuts and Eskimos in Alaska) between the ages of 6 and 17. About 90% of them were enrolled in school. There are four types of schools. Except for the first category, these are not "official," and there are no official data on the numbers of students, but they can be estimated with reasonable accuracy. The types, with numbers of Indian pupils, may be seen in Table 1.

Obviously, the educational picture is very complicated. One thing should be clear, however. Practically all Native Americans aged 6 to 17 have access to schools; in terms of proportions attending school by age, Native Americans compare well with whites, blacks, and Hispanics.

Early in the 1970s the federal government provided funds to assist Native Americans to reform and direct their own educational systems. The Indian Education Act of 1972 and its successor, the Indian Self-Determination and Educational Assistance Act of 1975, provide money and require Indian direction and Indian responsibility for the design of programs. The Bilingual Education Act, part of the Elementary and Secondary Education Act since 1967, provides funds for the employment of teachers who speak the local home language in Indian and Eskimo communities.

In 1975 Congress created the American Indian Policy Review Commission and instructed it to get a perspective on the status of American Indians in the U.S. The commission's final report in the summer of 1977 recommended that all government-aided Indian programs be brought together under a federal department or independent agency, reporting to the office of the President. The commission also recommended that Congress enact legislation to aid tribal governments and Indian communities in taking responsibility for control of their children's education, including recruiting and training Indians to serve as teachers in practically all schools with a predominantly Indian enrollment.

Since then several hundred Indian organizations have sought and received money from the federal government for education programs. As one example, in fiscal year 1976 approximately $18 million was given to school and tribal education projects in the form of 210 separate grants

Table 1. Indian Enrollment in Schools, 1978

	Type of School	Enrollment	% of Total
1.	Schools with practically all-Indian enrollment		
	BIA-operated boarding and day schools	47,000	17
	Indian-controlled school boards: contract with BIA (est.)	2,500	1
	Mission or other private schools	9,000	3
	Public schools operating on or contiguous to reservations	30,000	11
2.	Public schools with 50% to 90% Indian enrollment, contiguous to reservations or in native communities	105,000	38
3.	Public schools with 10% to 50% Indian enrollment, mainly in rural communities and small cities	50,000	18
4.	Public schools with less than 10% Indian enrollment, mainly in large cities	30,000	11

aimed at supplementing existing education programs and training Indians for work in the schools. This amplifies a program, started in the late 1960s, whereby the BIA contracted with local Indian school boards on the reservations and gave federal funds directly to the boards, which would then take responsibility for the schools. The first and best known of these contract schools is the Rough Rock School on the Navaho reservation. This school is governed by a five-person, all-Navaho school board, only one of whom has had any schooling. The school starts teaching in the Navaho language and devotes a good deal of attention to Navaho tradition and Navaho arts. John Dick, one of the first school board members, said:

> We want our children to be proud of being Navajos. We want them to know who they are. . . . In the future they will have to be able to make many choices and do many different things. They need a modern education to make their way, but they have to know both worlds — and being Navajo will give them strength.

By 1975 there were 15 of these Indian-contracted school boards, which had banded together into the Coalition of Indian Controlled School Boards.

The year 1971 marked the most comprehensive and favorable legal settlement of native people's claims to the land and its resources yet seen: the Alaska Native Claims Settlement Act. The educational implications and results of this act have profound significance for Alaskan natives and for the question of the viability of a policy of cultural pluralism for Indians.

This act, for the first time, placed very large economic resources in the hands of native people with very few external controls over the way the resources were to be used. Congress recognized the right of Alaskan natives to land and mineral resources, restored 40 million acres of land to native ownership, and promised to pay $962.5 million for land taken over by the state and federal governments. Some 55,000 Eskimos, Aleuts, and Indians live in Alaska; another 20,000 live outside Alaska, making more than 75,000 "Alaskan natives" of all ages who are entitled to equal shares of the land and money. During the 20-year period from 1971 to 1991, most of them will receive less than $1,500 apiece. They will also receive 100 shares in one of 12 Native Regional Corporations, which take title to the land and which keep, for investment purposes, 90% of the money paid under the act. Moreover, the corporations must distribute nearly half of their income to some 200 native villages, which will form corporations to select land, possibly invest money, or use the income to provide services to village residents.

The regional corporations were formed as quickly as possible after passage of the act and have been investing the approximately $200 million they received from the government in the first five years in productive enterprises, i.e., hotels, supermarkets, mineral exploration, reindeer herds, and fish canneries.

Stock in the regional corporations cannot be sold on the market until 1991, 20 years after passage of the act. At that time the youngest stockholder will be 20 years old (having been born on or before the day of passage of the act by Congress). The value of the stock will then depend on the investment experience of the corporations, just as it does for any other business corporation. Because every Indian, Aleut, and Eskimo in Alaska has become a "capitalist" by virtue of the act, there will be a need to understand this complicated process. One educational consequence has been the publication of a high school textbook, *Alaska Native Land Claims*, by economist-educator Robert D. Arnold, sponsored by the Alaska Native Foundation.

Other educational effects of the act may already be seen in the training of employees of the regional and village corporations and in the corporations' selection of officers who have some business or technological experience or training. Several vocational schools have come into existence, such as the school at Barrow, center of the Arctic Slope Regional Corporation and the northernmost settlement in the U.S. Furthermore, an Eskimo university, Inupiaq University, was founded at Barrow as a kind of community college, with representatives in a dozen villages on the Arctic Slope, and with correspondence courses offered for those who cannot get to class.

The 1970 census reported 827,000 Indians and Alaskan natives, compared with 552,000 in 1960. The Indian birthrate was about 37 per thousand population, compared with 18 per thousand for the U.S. population as a whole. Thus a conservative estimate of Native American population for 1980 is 1,150,000, heavily weighted with children and youth.

More than 50% of all Indians counted in the 1970 census lived in five states: Oklahoma, 98,000; Arizona, 96,000; California, 91,000; New Mexico, 73,000; and Alaska, 52,000. There were 33 states with a population of more than 4,000 Indians. The most numerous tribes in 1970 were: Navaho, 96,000; Cherokee, 66,000; Sioux, 48,000; Chippewa, 42,000; Lumbee, 27,000; and Apache, 23,000. Those are minimal figures, since fully 161,000 of the Indian census respondents did not name a tribal affiliation.

Some 31 tribes with more than 3,800 members reported in the 1970 census, a total of approximately 600,000. The number of tribes known to be in existence in the U.S. is approximately 130, leaving about 100 tribes each with fewer than 3,800 members apiece.

After 1960 larger proportions of Indian youth began to attend postsecondary institutions. This proportion probably multiplied fivefold between 1960 and 1970. Approximately 8,000 Indian students — about 12% of the 18- to 21-year-old group — were in universities or postsecondary colleges in 1970. At the same time, about 35% of this age group finished secondary school, 20% entered a university-level institution, and another 10% entered a postsecondary institution for vocational training. Five percent graduated from universities with a bachelor's degree based on four years of study. Compared with other American groups with low family incomes, these figures are encouragingly high.

A major reason for this performance was the availability of money to help pay for this kind of education — money provided both by the federal government and by a number of tribal councils. In 1969 the BIA awarded scholarship grants to 3,432 young people, an average of $868 per student. By 1975 the number of scholarship awards had increased to 15,000 with an average of $1,750 per student. In that year there were 1,497 graduates from four-year colleges who had received BIA scholarships. Of this number, 335 had been trained for teaching and 198 for health service work.

A 1977 report from the Department of Health, Education, and Welfare estimated that there were approximately 33,000 Native Americans in community colleges, junior colleges, and four-year colleges and universities. By this time a growing number of four-year colleges had Native American Studies departments. Morgan Otis, a California Indian educator, wrote:

> These programs tend to attract the educationally disadvantaged and culturally different people into the state college or university arena . . . provid[ing] them an area of study in which they can gain a sound foothold of confidence and, hopefully, the skills to complete a college education. In essence Native American Studies . . . serve as a steppingstone to advance the education of the Indian student, regardless of tribe or nation, while also exposing the rest of society to the attributes of the culturally different.

Several major universities now offer graduate programs in Indian Studies. Among them are the University of California at Berkeley and Los Angeles, the University of Arizona and Arizona State University at Tempe, and the University of Minnesota.

"Native Americans are facing some important choices in the next decade, both as individuals and as tribal organizations."

"Pioneer" colleges that had 50 or more Indian students per year in the period from 1966 to 1970 are the University of Alaska, Northern Arizona University (Flagstaff), Fort Lewis College (Colorado), the University of New Mexico, Phoenix (Arizona) Community College, Pembroke State University (North Carolina), the University of Montana, Northern Montana College, Central Washington State College, Northeastern State College of Oklahoma, Brigham Young University (Utah), and the Navaho Community College.

The Navaho Community College is a creation of the Navaho tribe. Founded in 1968, the college was built amid sagebrush, piñon, and juniper on the arid Arizona landscape, with the Lukachukai Mountains in the background. Navaho Community College accepts and recognizes the reality of and the persistence of Indian culture and institutions. It is based on the assumption that not only is it possible for Navahos to direct and control their own institutions but that this is the only way they will ever be able to assume total responsibility and self-support, at least as a group.

The college is ruled by a board of regents consisting of 10 Navahos, one from each of the five administrative areas of the reservation, two members elected at large and appointed by the tribal chairman, and three ex officio members: the chairman of the tribe, the chairman of the Navaho Education Committee, and the president of the college student body. The Indian faculty members have organized a curriculum committee to search out and formulate a Navaho philosophy of education, in which the present and future are rooted in the values of the traditional past. Ned A. Hatathli, first president of the college, said:

> If we can blend these and come up with a philosophy, this would be a steppingstone for the Navaho tribe. There is something good in Navaho values, in their way of rearing children. The Navaho have existed for centuries, and we have seen the growth of the people. Medicine men, the elders, are helping us search for the things that have sustained the Navaho.

A further impetus to higher education for Indians came in 1976, when $500,000 was provided for 50 four-year fellowships for students who had been accepted for professional study by universities. This money comes from the Indian Education Act and was allocated for the 1976-77 academic year to cover tuition costs and subsistence for students who had been accepted for programs in engineering, law, medicine, business, forestry, and fields related to one of these areas.

When the Indians were being placed on reservations in the latter part of the 19th century, so as to make way for the pioneer farmers who claimed the best agricultural land of the Great Plains and the West Coast, reservation lands were generally the least desirable, from the Anglo point of view. Reservations tended to be located on desert, or barren hills, or too far north for easy farming: Arizona, New Mexico, the Black Hills of South Dakota, the frozen tundra of Alaska.

Then, after about 1940, valuable minerals and fuels were discovered. Uranium, oil, gas, and coal brought industries and opened the promise of employment and of royalties to the tribes that owned the land.

The Navaho tribe, the largest and one of the better organized, was able to negotiate for royalties on fuels and uranium taken from the reservation. However, serious complications arose when Navahos working in the uranium mines began to die of lung cancer. Also, when power plants were built to burn coal to produce electric power, the problem of atmospheric pollution emerged.

Similar problems arose in the Black Hills and neighboring areas in the Dakotas and Wyoming. In 1979 Indians and Anglo ranchers formed the Black Hills Alliance to control uranium mining and to protect the limited water resources from exhaustion by coal gasification and by the creation of a 1,400-mile-long slurry pipeline designed to transport crushed coal to power plants in the Mississippi Valley. A 10-day International Black Hills Survival Gathering brought 1,500 participants to Rapid City, South Dakota, last July.

The protection of Indian human and land rights has been a major activity of the National Indian Youth Council, founded in 1961. It maintains an office in Albuquerque, New Mexico, with an executive director, Gerald Wilkinson, a Cherokee, and a board of directors consisting of members of seven tribes.

Educational experience for Indian youth in Oklahoma will grow out of a large agricultural cooperative project financed by a grant of $200,000 from the federal Administration for Native Americans, made to the Creek Nation in October 1979. The Creek Nation has 140,000 acres in eight Oklahoma counties and a tribal population of 26,000.

Breeding and selling Santa Gertrudis cattle, milking 250 cows, canning fruit and vegetables, and meat processing will provide jobs for several hundred people. Vocational agriculture and home economics will be given greater emphasis in the secondary schools of this area.

Native Americans are facing some important choices in the next decade, both as individuals and as tribal organizations. There seem to be three broad alternatives:

1. The development of local land, sea, and mineral resources, using modern technology. This is being done in several areas, especially the Southwest and Alaska. Mineral resources — oil, natural gas, coal, and uranium — are bringing royalties into the tribal treasuries and providing jobs, as well as money for college scholarship expenses.
2. Young Indians moving into the economic mainstream by securing high school and college education. Such preparation will help them enter the job market with greater ease. This is especially true for youth residing in urban centers.
3. A subsistence economy based on local resources of land and sea. On most of the Indian reservations the people make a bare living from farming and raising stock. A high birthrate forces these communities to send some of their children to make a living in urban areas.

All in all, educators and planners in the U.S. can take some satisfaction in having developed, at long last, flexible and effective long-range policies for the education of Native Americans. Problems there still are, of course, but Native Americans are beginning to feel that they control their own destiny. The worst of the period of discrimination is over, and charges of genocide are no longer heard. ☐

ROBERT J. HAVIGHURST (University of Chicago Chapter) is professor of education and human development, University of Chicago. In the preparation of this article, he has drawn from two of his own publications: The Final Report *of the National Study of American Indian Education, which he directed (available through ERIC), and* To Live on This Earth: American Indian Education *(Doubleday, 1972), co-authored with Estelle Fuchs. More recent sources include* Final Report: A Policy for the Future, *1977, American Indian Policy Review Commission.*

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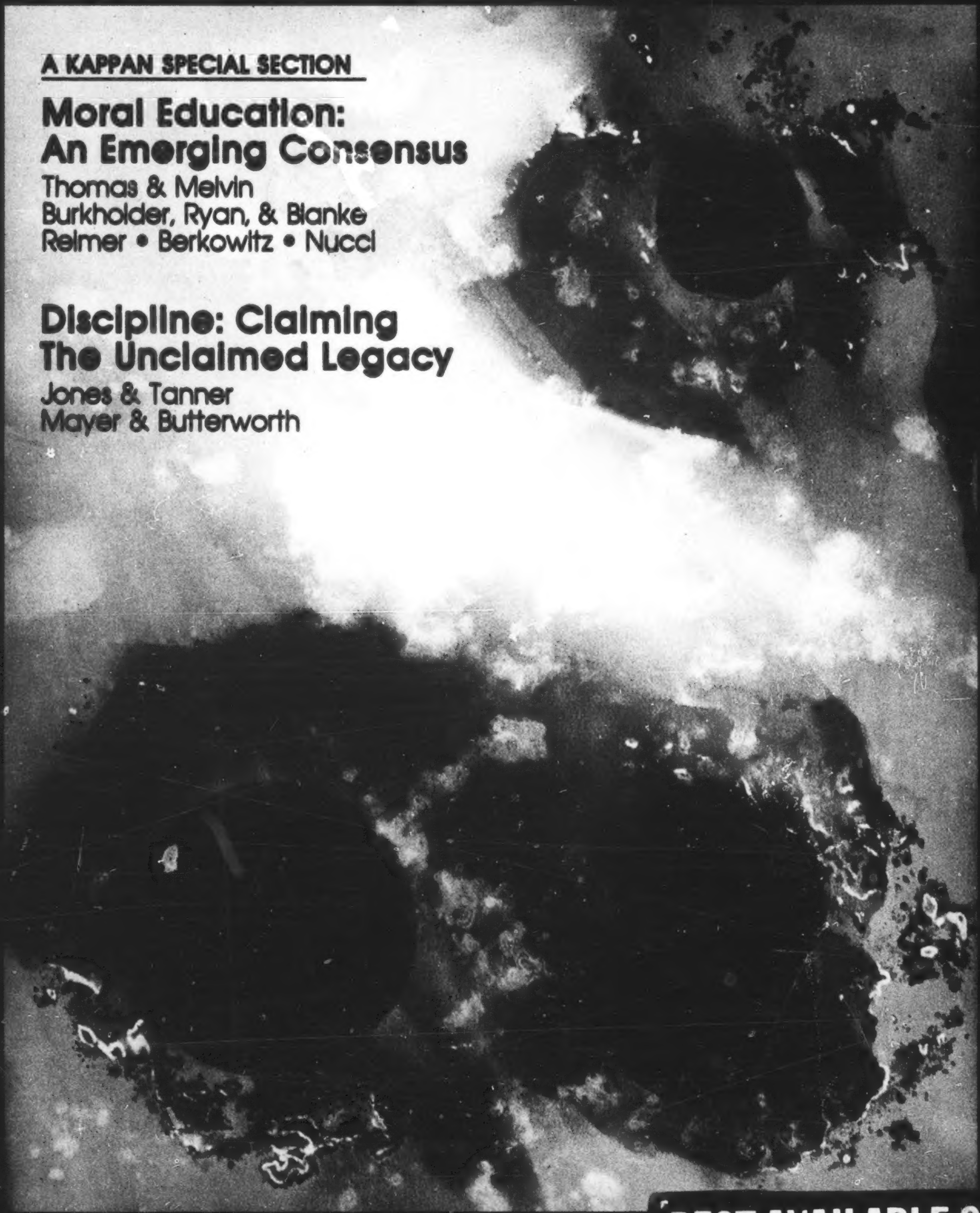

A KAPPAN SPECIAL SECTION

Moral Education: An Emerging Consensus

Thomas & Melvin
Burkholder, Ryan, & Blanke
Reimer • Berkowitz • Nucci

Discipline: Claiming The Unclaimed Legacy

Jones & Tanner
Mayer & Butterworth

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The *Phi Delta Kappan* publishes articles concerned with educational research, service, and leadership; issues, trends, and policy are emphasized. Views expressed do not necessarily agree with positions taken by Phi Delta Kappa, the professional fraternity in education.

at all sure that the author did — but they certainly sound impressive. Pedaguese, the jargon of educators, often lapses into this kind of pseudo-jargon.

Neither jargon nor pseudo-jargon has any place in articles written for parents and other nonprofessionals. In fact, keep them to a minimum even when writing for fellow educators. Saying the same thing in standard English makes the meaning clearer. If a technical term cannot be avoided, it should be defined. Many readers, including some of the journalists who write for newspapers, need to be told that a "norm," as the word is used by educators, is only an average — not a standard that every child should be expected to achieve. Thus the fact that 50% of the children in a school fall below the national norm is no cause for alarm.

In selecting a topic you need not look for a fight, but neither should you try to avoid all controversy. Because most significant ideas seem controversial when first expressed, controversy is one of the occupational hazards a writer faces. You need not hesitate to express your opinions, provided that the context makes it clear that these are opinions, not facts or agreed-upon truths.

The best topic for you is one with which you are thoroughly familiar and about which you have thought deeply. If you feel strongly about a problem, you will write more vigorously; if you are angry, the first draft may need to be toned down before publication, however. Readers respond best to a writer who clearly knows what he or she is talking about and who is not afraid to express his or her views. Although professional educators often complain that the editors of magazines with large general circulations do not seem to want articles from members of the education profession, this is a misapprehension. I have always found editors remarkably receptive to any article that is written with style and vigor, is free of jargon, and says something new.

Finally, it is a rare manuscript that cannot be improved by rewriting, or, as James Thurber used to say, "running it through the typewriter once more." The first draft of this little essay was three times its present length. I did not try to publish it because I knew it was too long, too verbose, too rambling. I put it aside for a few days and then rewrote it — several times. Each draft became more concise, more vigorous, more readable. Now that it is down to a two-pager, I can send it out with confidence that some editor will want to publish it and that it will be widely reprinted. And it still says about all I really know about writing. □

The Making of a President, Higher Education Style

by Jerry Duea

In this article, the first in a three-part series, Mr. Duea reports the results of a survey of presidents of public and private colleges and universities. Part one covers the presidents' academic preparation and previous professional experiences.

What is the academic background of presidents of U.S. colleges and universities? What professional experiences shaped their careers? Which of these past experiences made the most significant contributions to their effectiveness in their current positions?

To answer these and other questions, we surveyed the presidents of the 1,345 U.S. colleges and universities known to engage in teacher education. Of these, 481 were public institutions and 864 were under private sponsorship and control. Some 544 responses were received: 206 from public college and university presidents and 336 from the heads of private institutions (two respondents failed to identify institutional sponsorship status). Represented were 130 universities (33 of them land-grant universities) and 268 liberal arts colleges (seven neglected to report institutional type). Responses were received from 477 males and 66 females; of the latter, 61 administered private institutions and five were from public institutions.

Academic Preparation

Survey participants were asked to list their academic concentrations at the baccalaureate, master's, and doctoral levels. Of the 544 respondents, 417 identified their baccalaureate majors, 336 reported their master's degree majors, and 371 gave their doctoral majors or emphases (see Table 1).

The social sciences were the predominant emphasis in the undergraduate and graduate education of the presidents who responded to the survey. History was by far the field most frequently reported; it held a huge advantage over all other subject areas except at the terminal degree level, where it finished a close third behind higher education and unspecified administration.

It seems reasonable to assume that terminal degree training is the most important aspect of academic preparation for college or university presidents. At the terminal level, social science fields — identified by 28.2% of those who provided such information — held an almost 2-1 margin over the next most frequently mentioned area of emphasis. Following social science fields were unspecified administration (14.6%), education (14.5%), psychology (8.4%), and English/language arts (7.8%).

The Ph.D. and the Ed.D. were the terminal degrees most frequently held. Of the 305 respondents who reported this information, 248 had earned the Ph.D. and 48 had earned the Ed.D. In third place was the M.D., which was named by only five respondents.

Professional Experiences

Participants in the survey were asked: 1) to identify, from a list of 17 areas of professional experiences, those they had had prior to assuming their current leadership positions and 2) to evaluate on a five-point scale the importance of each experience. Prior experiences are summarized in Table 2.

The previous experience most widely shared by the college and university presidents who participated in the survey was teaching in postsecondary institutions, which was identified by 439 respondents

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(81.0%). It was followed by deanships in higher education (300 or 55.4%), vice presidencies in higher education (249 or 45.9%), chairing postsecondary academic departments (239 or 44.1%), and teaching in secondary schools (203 or 37.5%).

Proportional differences between responses by representatives of public and private institutions were examined statistically by Fisher's z ratio. As might be expected, the proportion of respondents representing private institutions who indicated that they had had theological experience exceeded the proportion from public institutions who had had such experience (25.9% versus 3.9%). Favoring public institutions were the proportions of respondents who had held appointive public offices (25.2% versus 14.3%), deanships (65.0% versus 38.4%), and vice presidencies in higher education (58.3% versus 38.4%). All differences reported were significant at the .01 level.

Presidents of both public and private institutions exhibited a remarkable consistency (.994) in regard to their prior experiences. Although only 66 responses (12.1%) were received from female administrators, sex differences in previous experiences were also examined. Proportionally speaking, males held the advantage in elective public office experience (7.1% versus 0%), theological experience (19.3% versus 4.5%), and vice presidencies in higher education (49.3% versus 22.7%). Proportionately greater numbers of females had previous teaching experience in elementary (42.4% versus 13.6%) and secondary schools (65.2% versus 33.5%).

The five experiences listed by respondents as providing the most valuable preparation for institutional presidencies, in order of perceived importance, were 1) vice presidencies in higher education, 2) deanships in higher education, 3) teaching in postsecondary institutions, 4) other administrative experiences, and 5) managerial positions in business and industry. Identified most frequently under "other administrative experiences" were other institutional presidencies, assistant to the president, and chancellor.

The two formal preparatory experiences — administrative internships in higher education and academic training in educational administration — ranked eighth and 10th respectively. They were in a virtual tie with theological experience, which ranked ninth.

Statistical examination (with Duncan's multiple range test) of the overall results revealed that both administrative internships and academic training in educational administration were exceeded in importance as preparatory experiences by the four highest-ranking experiences: vice presidencies, deanships, postsecondary teaching, and other administrative experiences. In turn, the two formal preparatory experiences exceeded the four lowest-ranking ones, namely: 14) teaching in secondary schools, 15) health practices (dentistry, medicine, veterinary medicine), 16) elective public office, and 17) teaching in elementary schools.

Discussion and Implications

One of the most noticeable findings of the PROBE Institutional President Survey is the dearth of females who occupy college and university presidencies, especially in public institutions. As noted earlier, only 12.1% of the respondents were women, and most of these were from private institutions. Obviously, women are a long way from achieving a reasonable share of the top leadership positions in higher education.

Another interesting finding was the fact that fewer than half the nation's college and university presidents who responded to the survey had been exposed to formal administrative training. At the terminal degree level, only about 30% of respondents reported having earned degrees in areas allied with some form of administration (business administration, higher education, unspecified administration). And none of the respondents reported having earned terminal degrees in educational administration.

From the standpoint of professional experiences, however, 32.2% of the respondents indicated that they had participated in academic training in educational administration that led to a degree and/or certification. An additional 13.3% said that they had participated in administrative internships in postsecondary education, but there was no way of identifying how many of these experiences overlapped with or were components of academic administrative training programs.

It is ironic, of course, that there are no certification requirements for college and university presidents. A glance at the "Bulletin Board" in the *Chronicle of Higher Education* reveals that the most common requirements for such positions (according to the advertisements) are an earned terminal degree, evidence of scholarly excellence in one's field, and administrative experience in higher education.

Adding to the irony of the situation are the stringent certification requirements imposed by all states for the attainment of elementary school principalships, while no such requirements exist at the other extreme — for leadership positions in our largest, most complex educational institutions. How does one explain the fact that more pertinent academic training and ex-

Table 1. Academic Degree Emphasis Reported by College and University Presidents (N = 544)

	Degrees					
	B.A./B.S.		M.A./M.S.		Terminal	
Majors	N	%	N	%	N	%
Administration (unspecified)	0	--	31	9.2	54	14.6
Agricultural Fields (Agr., Agr. Econ., Agronomy, Forestry)	12	2.9	3	0.9	3	0.8
Business Fields (Bus., Bus. Adm., Bus. Ed., Mgt. & Fin.)	11	2.6	4	1.2	3	0.8
Education (Ed., Ed. Adm., Elem. Ed., Guidance, P.E., Higher Ed., Special Ed.)	30	7.2	60	17.9	54	14.5
Engineering/Technology (Eng., Ind. Ed., Ind. Relations)	13	3.1	7	2.1	9	2.4
English/Language Arts (Classics, Communications, Eng., Lit., Ling., Rhet., Speech)	56	13.4	32	9.6	29	7.8
Fine Arts (Art, Art Ed., Music)	12	2.9	8	2.4	3	0.8
Foreign Languages (Greek, Latin, Unspecified)	12	2.9	6	1.8	4	1.1
Health Fields (Hosp. Adm., Med., Pharmacy, Vet. Med.)	1	0.2	1	0.3	5	1.4
Law	0	--	0	--	3	0.8
Liberal Arts	6	1.4	0	--	0	--
Library Science	1	0.2	0	--	0	--
Mathematics	18	4.3	10	3.0	6	1.6
Philosophy	30	7.2	14	4.2	19	5.1
Psychology	11	2.6	22	6.5	31	8.4
Religion/Theology	14	3.4	32	9.5	16	4.3
Natural Sciences (Bio., Bot., Chem., Ecol., Geol., Geophys., Phys., Sci., Zoo.)	52	12.6	21	6.3	27	7.2
Social Sciences (Anthro., Econ., Govt., Hist., Hum., Pol. Sci., Soc. Sci., Soc. Wel., Sociology)	138	33.1	85	25.4	105	28.2
Total Responses	417		336		371	

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perience is required for the principalship of a grammar school than for the presidency of a state university? It appears that the regulatory agencies governing education may have overlooked something!

Or have they? Direct, antecedent professional experiences — vice presidencies, deanships, managerial positions in business or industry, and chairmanships of postsecondary academic departments — might easily make up for the lack of academic administrative training and administrative internships as preparatory experiences. But how do we account for the fact that survey respondents favored postsecondary teaching experience, other teaching experiences (military, adult education, and graduate teaching), and theological experiences as equal or superior to formal administrative training as preparation for presidencies in higher education?

In any event, U.S. colleges and universities would do well to give attention to upgrading programs designed for the preparation of leaders in higher education, at both the preservice and inservice levels. (More specific suggestions about some of the topics worthy of consideration will be presented in subsequent installments in this series.)

Administrative internships deserve more attention. Although females viewed such internships somewhat more positively than males (males rated them even lower than academic training), internships still did not show the kind of edge one would expect practical experience to hold over academic preparation. This represents a rather significant departure from the situation that prevails at the undergraduate level, where practice teaching and similar practicum experiences are usually viewed favorably. Those who are charged with developing, implementing, and evaluating administrative internships in higher education should strive for similar quality. Well-designed practical experiences related to academic administrative training could promote greater efficiency among new administrators and avoid the pitfalls associated with trial-and-error approaches.

Table 2. Evaluation of Professional Experiences Reported By Heads of U.S. Colleges and Universities

Experiences	Public Inst. (N = 206) %	Public Inst. Mean Rating[a]	Private Inst. (N = 336) %	Private Inst. Mean Rating[a]	Combined (N = 542) %	Combined Mean Rating[a]
Teaching						
Elementary	15.0	2.65	18.5	2.73	17.2	2.70
Secondary	34.0	3.23	39.6	3.32	37.5	3.29
Postsecondary	84.5	4.63	78.9	4.63	81.0	4.63
Other[b]	7.3	4.13	12.8	4.33	10.7	4.28
Public Service						
Appointive public office	25.2	3.87	14.3	3.71	18.5	3.79
Elective public office	9.7	3.20	4.2	3.29	6.3	3.24
Professional Practice						
Managerial positions in business or industry	15.0	4.19	15.2	4.45	15.1	4.36
Health fields (dentistry, medicine, vet. medicine)	6.3	3.39	2.4	3.00	3.9	3.24
Law	2.9	3.50	3.3	3.27	3.1	3.35
Theology	3.9	3.50	25.9	4.12	17.5	4.06
Administration						
Academic training in ed. admin.	35.9	3.96	30.1	4.14	32.3	4.06
Elem./sec. sch. admin.	16.5	3.47	17.0	3.93	16.8	3.76
Admin. internship in postsec. ed.	14.1	3.90	12.8	4.19	13.3	4.07
Chair, postsec. acad. dept.	47.6	4.45	42.0	4.16	44.1	4.28
Deanship in higher ed.	65.0	4.71	49.4	4.80	55.4	4.76
Vice pres., higher ed.	58.3	4.90	38.4	4.81	45.9	4.85
Other[c]	25.2	4.52	22.6	4.53	23.6	4.52

[a] Mean ratings were based on a five-point scale with five being high.

[b] Leading responses under "other" teaching were military training, adult education, and graduate teaching.

[c] Leading responses under "other" administration were presidencies of other institutions, assistant to the president, chancellor, military officer, and registrar.

The problems currently facing higher education demand that increasingly effective and efficient leadership be developed within the profession. Institutions that accept the challenge may well enjoy side benefits in the form of higher prestige for their programs and, subsequently, a larger pool of graduate applicants. ☐

Psychiatry

"Consider the possibility — just as a hypothesis, of course — that your feelings of inferiority are the result of remarkable self-awareness."

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April 1981

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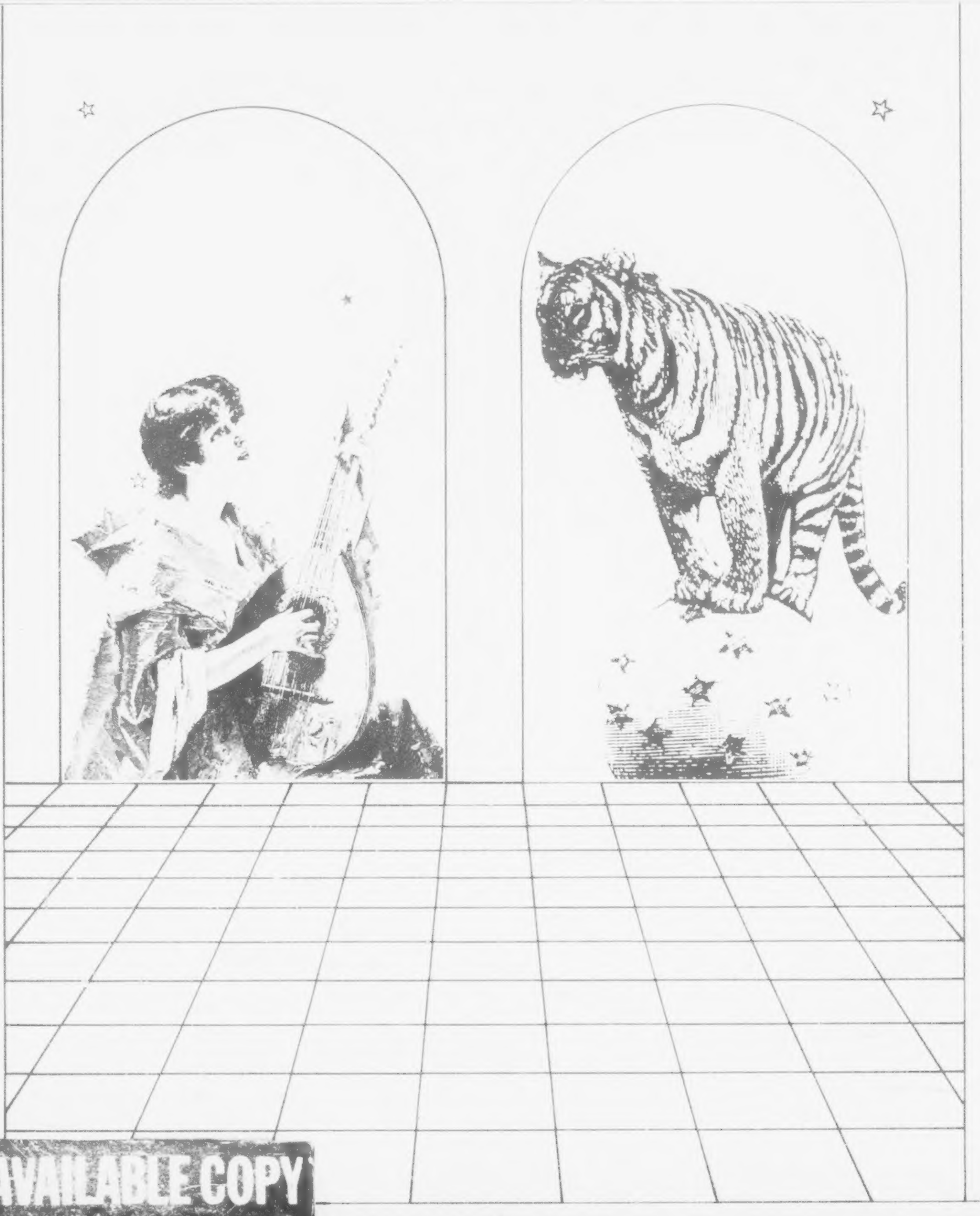
Alternative Schools: A Question of Choice?



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Presidents' Views on Current and Future Issues in Higher Education

by Jerry Duea

In part two of a three-part series, Mr. Duea asks college and university presidents to name today's most important issues and those that will present serious challenges in the coming decade. Inflation is a runaway choice as the most troublesome issue.

This second installment of the report on the PROBE Institutional President Survey offers data answering two questions of significance to the present and future of higher education in the U.S.: What issues currently confronting our institutions of higher learning do college and university presidents see as most important? What issues do they foresee as serious challenges to higher education during the next 10 years?

We asked the presidents of 481 public institutions and 864 private institutions of higher learning — all known to engage in teacher education — to identify, in order of importance, the three issues they saw as most challenging in February 1980, when the survey took place. We also asked the presidents to identify and rank two issues they felt would pose serious challenges in the coming decade. Presidents of 206 public and 336 private institutions responded. (Two respondents failed to identify their institution's sponsorship.)

It became obvious early in our analysis of the data that sponsorship status (public versus private) was the only truly revealing means of making data comparisons. Other potential comparisons — e.g., sex or size of enrollment, institutional status (colleges versus universities) — simply reflected sponsorship status. Therefore we confine our data comparisons to analyses of similarities and differences in the reports of these two major subgroups.

Current Issues

We identified 20 separate categories of problems, nearly half of them directly related to financial concerns (see Table 1). In fact, virtually all the issues cited by the presidents could be assigned to one of three general categories: 1) fiscal and funding concerns, 2) planning and program considerations, and 3) concerns about faculty development and renewal.

The presidents of public and private institutions agreed exactly on only the first-, second-, and fifth-ranked issues: inflation and financial concerns, enrollment considerations, and changing mission and purpose. Despite the seeming variability of their remaining rankings, a significant positive relationship actually exists (rho = .567, $p < .01$).

Significantly greater proportions of the respondents representing public institutions identified governing-board relations, faculty militance and unionism, and staff reduction and tenure considerations among their top three choices. Among the heads of private institutions, enrollment concerns, endowment and fund raising, maintaining unique and independent program emphases (e.g., liberal arts, religion), and inter-institutional competition and rivalry were identified with significantly greater frequency ($p < .01$).

Three of these differences deserve elaboration. Substantial numbers of respondents in both groups identified governing-board relations as a problem, but their comments and emphases differed. A majority of the responses from public institutions focused on financial relationships with their boards; the majority of those from private institutions were concerned either with problems of church affiliation or with difficulties in securing active, competent trustees. Moreover, the maintenance of unique, independent program emphases and coping with inter-institutional competition were problems identified only in the private sector. Comments in these areas focused on efforts to resist the secularizing of religion-based education, to withstand the encroachment of vocational demands upon the liberal arts, and to maintain independent approaches to education.

For practical purposes, at least half of the 20 current problems listed could be construed as stemming from fiscal concerns. At least four of the top 10 problems identified by presidents of public institutions had strong financial overtones (numbers indicate rankings): 1) inflation and financial concerns, 2) enrollment considerations, 4) program maintenance/reorganization in response to inflation and enrollment declines, and 8) faculty militance and unionism. In fact, among the top 10 problems only "other miscellaneous issues" (ranked sixth) is totally unrelated to finance. Of the top 10 problems identified by presidents of private institutions, five were closely related to fiscal concerns (numbers indicate rankings): 1) inflation and financial concerns, 2) enrollment considerations, 3) endowment and fund raising, 6) program maintenance/reorganization in response to inflation and enrollments, and 8) facility development and improvements. Here again, if less direct relationships are considered, nine of the top 10 problems relate to finance.

Following fiscal concerns in importance were those related to planning and program considerations and faculty improvement and renewal. The presidents cited changing mission and purpose, program development and improvements, and program maintenance in response to inflation and enrollment as serious challenges related to planning and program considerations. Faculty recruitment/retention, faculty and student morale, faculty development, faculty salary parity, and staff reduction and tenure considerations are issues related to faculty improvement and renewal.

Future Issues

A total of 496 survey respondents representing 189 public and 307 private institutions listed two additional problems that they believed would present serious challenges to their institutions in the next

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10 years. The same 20 problem categories were used to group these responses (see Table 2).

Fiscal problems also headed the list of future concerns, but changing mission and purpose and government/legal regulations and interference moved into the top four ratings for both subgroups. Among lower-priority issues, the elevated importance of energy concerns and of faculty militance and unionism are noteworthy.

Overall there was considerable agreement between each group's ratings of current issues and the corresponding ratings of future issues (for public institutions, rho = .811; for private institutions, rho = .744). The correlation between the ratings of both groups on future issues (.488) was somewhat lower than that on current issues (.567).

Discussion and Implications

The results of our survey of college and university presidents agree substantially with the findings of an earlier PROBE survey of district superintendents.[1] Both the superintendents and the college presidents showed grave concern with finances. The top two problems identified by both the college and university presidents and the school district superintendents were: 1) inflation and financial concerns and 2) declining enrollment. This finding suggests that educational institutions at all levels are facing a severe financial crisis, and projections of decreasing enrollment presage further erosion of the bases of financial support.

Table 1. Critical Issues Currently Confronting Colleges and Universities As Identified by Presidents of Those Institutions

	Public Institutions (N = 202)			Private Institutions (N = 325)		
	Response			Response		
Issues	Rank	%*	Score**	Rank	%*	Score**
Inflation and financial concerns	1	65.3	317	1	63.7	493
Enrollment declines/recruitment and retention	2	49.0	212	2	66.2	482
Program development and improvements	3	38.6	136	4	32.9	169
Program maintenance/reorganization in response to inflation and enrollment	4	18.8	79	6	11.4	83
Changing mission and purpose	5	18.8	75	5	17.5	101
Other miscellaneous issues***	6	13.4	51	9.5	7.7	39
Governing-board relations	7	11.9	43	17	3.7	18
Faculty militance and unionism	8	10.4	38	16	3.4	20
Public relations	9	9.4	38	15	4.9	24
Government/legal regulations and interference	10	9.9	33	9.5	7.7	39
Faculty and student morale	11	8.9	29	13	6.5	34
Facility development and improvements	12	7.4	29	8	9.8	46
Faculty development	13	8.9	28	12	7.1	34
Faculty recruitment/retention	14	6.9	28	11	7.1	38
Endowment and fund raising	15	6.9	23	3	37.5	257
Staff reduction and tenure considerations	16	5.0	20	20	1.2	7
Faculty salary parity	17	5.0	18	14	4.9	25
Energy concerns	18	1.5	5	19	2.5	10
Inter-institutional competition and rivalry	19.5	0.0	0	18	3.4	15
Maintaining unique, independent emphases (liberal arts, religion, etc.)	19.5	0.0	0	7	9.8	68

*Percentage of respondents in each category who identified each issue as among the top three confronting their institutions.

**Scores were accumulated on the basis of 3 points for each top-ranking response, 2 points for each second-ranking response, and 1 point for each third-ranking response.

***Issues that did not conform to other categories; among the more frequent ones were athletics and Title IX (6), improved management (6), and temporary enrollment increases (3).

The presidents of both public and private colleges and universities saw keeping pace with their institutions' changing missions and purposes and dealing with the threat of increased government/legal regulations and interference as problems likely to be important in the next 10 years. These two issues ranked, respectively, third and fourth overall.

The concern for maintaining an institution's unique, independent program emphasis was prominent only among heads of private institutions (ranking seventh as both a current and a future issue). Some variations on the theme of maintaining institutional integrity may well be significant factors for the future of higher education in all U.S. institutions, however. At the heart of the matter are *program integrity* and *academic freedom* — both major principles upon which high-quality higher education has traditionally been founded. How will they fare under the increasing pressures of contracting budgets and declining enrollment?

Program integrity is threatened by both financial pressures and enrollment declines because students equal money in the form of tuition income, legislative appropriations, or both. There are two ways to increase enrollment — recruit more students and improve retention rates.

More students may be attracted in a variety of ways, some less than desirable: e.g., relaxing admission standards, easing program requirements and grading standards, creating less demanding courses. The latter two may also serve to improve student retention rates. However, program integrity is likely to suffer as a result. Even in institutions that resist the temptation to "water down" programs to boost enrollment, enrollment considerations can powerfully deter program reorganization and improvement. B. Othanel Smith, in discussing the problems of reform in teacher education, aptly describes how hard times can inhibit innovation:

> Even in the best of times, colleges of pedagogy are fiercely competitive in their quest for students. Any proposed change in program is always scanned for its effect upon enrollment. A faculty member will think of how the change will affect his or her classes; a department chairman will measure the change against its effects upon courses and enrollment, and the dean will do likewise for the college as a whole. When it appears that a change might depress enrollment, it is not unusual for someone to say, "If they don't come here, they will go elsewhere. So what is gained?" Of course this is a reasonable reaction, and it underwrites the impotence of colleges to lift themselves individually.[2]

If allowed to grow unchecked, the fierce competition for students may eventually dissolve traditional distinctions between junior colleges, trade schools, colleges, and universities. In the past many two-year institutions developed pre-liberal arts and preprofessional programs. Today many colleges and universities are planning to compete for students with two-year institutions by offering a variety of vocational programs and other programs of limited scope.

Still another growing threat to program integrity is the willingness of some institutions to certify indiscriminately credit for programs or workshops conducted by outside agencies in exchange for a share of the tuition. Often such arrangements involve considerably less instructional time than is required by accrediting agencies, and so they often attract teachers and others who must earn periodic credits for recertification.

Program integrity may also suffer as a result of ill-considered attempts to economize operations. Expensive laboratory courses and high-cost programs with limited enrollments may be the first items cut by economy-minded administrators. Deferred maintenance programs, reduced equipment and material acquisitions, noncompetitive faculty salaries, and staff reduction efforts can also affect program quality. Especially detrimental may be the elimination of younger, untenured faculty upon whose energies and enthusiasm rests the future of most institutions and programs.

Perhaps the most serious threat to academic freedom (and indirectly to program integrity) is the not-so-subtle influence exerted by granting agencies — federal or private. Although such agencies seldom try to legislate curriculum, they do dictate which programs will be funded. Typically, the longer "soft money" programs endure, the more restrictive the guidelines become and the less latitude there is to exercise judgment locally. It is very easy for institutions to fall into the trap of proposing, designing, and conducting programs incompatible with their interests and expertise simply to attract grant funds and, perhaps even more important, to obtain the substantive indirect cost benefits that accrue to sponsoring institutions. Institutions are especially vulnerable to such influences in times of financial stress and enrollment declines.

Table 2. Issues That College and University Presidents Believe Will Present Serious Challenges to Their Institutions in the Next 10 Years

	Public Institutions (N = 189)			Private institutions (N = 307)		
	Response			Response		
Issues	Rank	%*	Score**	Rank	%*	Score**
Inflation and financial concerns	1	31.7	151	2	26.4	200
Changing mission and purpose	2	27.5	129	4	14.7	116
Enrollment declines/recruitment and retention	3	21.7	109	1	30.6	252
Government/legal regulations and interference	4	13.2	62	3	21.8	178
Program development and improvements	5	11.1	52	8	8.5	68
Faculty militance and unionism	6	10.6	50	12	6.2	49
Program maintenance/reorganization in response to inflation and enrollment	7	10.6	48	11	6.8	52
Other miscellaneous issues	8	9.5	44	15	5.2	37
Facility development and improvements	9	7.4	38	6	11.7	92
Faculty and student morale	10	7.9	34	18.5	2.9	22
Public relations	11	6.9	34	20	2.9	21
Staff reduction and tenure considerations	12	5.8	31	16	3.9	28
Faculty development	13	5.3	27	13	6.5	46
Energy concerns	14	4.8	23	9	7.2	56
Endowment and fund raising	15	4.8	22	5	15.6	109
Inter-institutional competition and rivalry	16	4.2	21	14	5.2	39
Governing-board relations and governance	17	3.7	17	18.5	2.9	22
Faculty salary parity	18	2.1	9	17	2.9	24
Faculty recruitment/retention	19	1.1	5	10	6.8	54
Maintaining unique, independent emphases (liberal arts, religion, etc.)	20	0.0	0	7	10.1	80

*Percentage of respondents in each category who identified each issue as among the top two that will confront their institutions in the next 10 years.

**Scores were accumulated on the basis of 2 points for each top-ranking response and 1 point for each second-ranking response.

Federally legislated requirements and directives, such as Title IX and Section 504 of the Vocational Rehabilitation Act (which deals with access to buildings for the handicapped), also strain institutional budgets. Often such requirements make financial demands far in excess of what was anticipated. And all too frequently institutions are left to their own devices to meet these demands when federal funds are not provided.

Funding sources closer to home (e.g., regents, trustees, state legislatures) can pose even greater threats to program integrity and academic freedom than the federal government or large foundations. Numerous compromises need to be made to accommodate the spending limits set by these groups. And controversial faculty actions — whether individual or collective — can have a detrimental impact on the funding decisions of these groups.

Some questions remain regarding how individual institutions and their administrators will approach these and other problems over the next decade. Will they be able to avoid compromising program integrity in the interest of economy and student recruitment and retention? Will they be able to preserve academic freedom in the face of declining enrollment and financial pressures? Will they be able to resist undesirable influence and control by government agencies and more immediate sources of financial support as they strive for fiscal security?

The answers to these questions will probably be more a matter of degree than of simple yes or no. The top administrators in the nation's public and private colleges and universities face the unenviable task of piloting their institutions through a period of crisis on courses fraught with competing alternatives, none totally right or wrong. Inevitably some will fail. We may hope their number will be small.

---

1. Jerry Duea and Walter L. Bishop, "Important Differences in Public and Professional Perceptions of the Schools," *Phi Delta Kappan*, September 1980, pp. 50-52.

2. B. Othanel Smith, "Pedagogical Education: How About Reform?," *Phi Delta Kappan*, October 1980, p. 88.

Meeting Student Needs: Evidence for the Superiority Of Alternative Schools

by Gerald R. Smith, Thomas B. Gregory, and Richard C. Pugh

Alternative schools come closer to satisfying student needs than do conventional schools, say the authors after studying 13 schools in four states. In fact, the differences between the two types of schools were amazingly large.

Meeting the needs of students is the purpose of schools. Most parents, students, teachers, and administrators are likely to agree on this point even though they may differ on what those needs are and how to meet them. We have used one definition of student needs, Abraham Maslow's hierarchy of needs,[1] to develop an instrument called the Statements About Schools (SAS) Inventory. The SAS is designed to assess how well a school is satisfying the needs of its students as judged by both its students and teachers. It has enabled us to state with some confidence that alternative schools come closer to satisfying student needs, as defined by Maslow's hierarchy, than do conventional schools.

During the 1970s hundreds of alternative schools sprang up in public school systems throughout the U.S. One justification for these schools was that they comprised clear, legitimate alternatives to conventional school programs. Yet the specific nature of the differences between conventional and alternative programs has never been clearly identified.

Environmental characteristics should be one source of variance. Although a number of instruments have been developed to identify environmental factors,[2] none is able to measure how well alternative schools are meeting the needs of their students or, even more interesting, to compare their success in meeting student needs with the success of conventional school programs. Since this comparison was a major goal of our study, the SAS was specifically designed to accomplish this task. We shall describe it briefly.

The SAS Inventory

Analysis established that the SAS was highly correlated with the Quality of School Life Questionnaire (r = .70 to .78), our measure of concurrent validity.[3] Regarding reliability, the SAS achieved Cronbach alphas ranging from .83 to .97. The instrument contains four scales corresponding to the top four levels of the Maslow needs hierarchy.

Security Needs. This scale focuses on students' needs for a stable, orderly, and controlled environment that minimizes physical and psychological threat and fosters a sense of well-being. A high score on this scale suggests an environment that emphasizes control and order without necessarily being oppressive. A low score suggests an environment that places little emphasis on control and order (though not necessarily a chaotic one).

Social Needs. This scale measures the extent to which a school provides opportunities for students to establish friendships with peers and adults and fosters feelings of belonging to a group. A high score on this scale indicates an environment that emphasizes building social relationships and encourages feelings of belonging and being liked by others. A low score suggests an environment that does little to encourage the socializing function but is not necessarily antisocial.

Esteem Needs. This scale measures how well a school helps students to feel capable of being successful and reaching important levels of achievement. A high score reflects an environment that provides many avenues to success and lessens the likelihood of failure. A low score indicates an environment that places little emphasis on achievement and status but not necessarily one laden with failure and degradation.

Self-Actualization Needs. This scale measures how well a school helps students grow in personally meaningful and satisfying ways toward the goal of becoming more complete and integrated human beings. A high score suggests an environment that enhances personal growth and emotional maturity. A low score reflects an environment that treats these goals more casually but is not necessarily inhumane.

To complete the SAS, students and teachers do two separate Likert-scale sortings of identical sets of 40 statements.[4] The first, reflecting their judgments of how well their actual school is meeting student needs, yields a Needs Satisfaction (Actual) score. The second, indicating their individual perceptions of their ideal schools, those they would most like to attend or to teach in — yields a Needs Satisfaction (Ideal) score. A third score, which we term Adjusted Needs Satisfaction, is derived through regression analysis and denotes the relationship of "actual" scores to "ideal" scores.[5]

Since space prohibits interpreting all of these scores, we are using the Adjusted Needs Satisfaction scores in this article, because they tend to compensate for idiosyncratic differences in individuals' responses to an instrument such as the SAS. To better understand the usefulness of the adjusted scores, imagine two students who have very similar perceptions of their actual schools but very different perceptions of their ideal schools. We would define the student whose actual score more closely matches his or her ideal as being the more satisfied of the two.

Once we obtained the average scores for both students and teachers on each SAS scale for each school, we converted these two sets of scores into standard scores; i.e., the mean of each scale equals 50 and the standard deviation equals 10. Because students and teachers represent such different populations, we compiled standard scores separately for each group. As a result, comparisons across the groups cannot be made using these data.

The Schools

Altogether, seven alternative and six comprehensive high schools in four states participated in the study. We did our best to identify schools in both samples that would be judged good or very good by most educators. Most of them are a source of pride to their communities. A brief description will suggest their variety. In size, the schools ranged from about 50 students to more than 2,800. Five of the six comprehensive schools were larger than any of the seven alternative schools, although one alternative did have an enrollment of 1,200 students. Seven were

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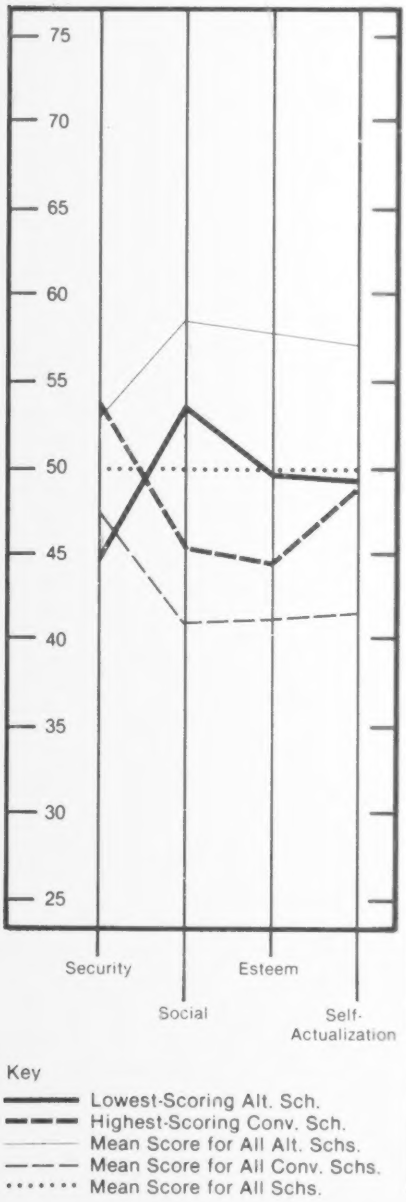
located in large metropolitan areas, two were in suburbs, and four were in small towns.

The comprehensive schools made available a full range of curricular offerings, while the alternatives, with two exceptions, offered a more limited range of subjects. Six of the alternatives were housed in their own facilities; one was a program within a large comprehensive high school of 3,200 students. Only the alternative program in this school was included in our study.

Figure 1. Comparisons of the Lowest-Scoring Alternative and the Highest-Scoring Conventional Schools and the Mean Scores for The Two Groups of Schools (as Judged by Students)



The racial/ethnic composition of the student bodies of the schools varied considerably. Among the seven alternative schools, three were predominantly black; one maintained, by choice, a 50-50 racial balance. Of the six comprehensive schools, five were predominantly white and one had a small percentage (10% to 20%) of blacks and other minority groups. Four of the seven alternative schools worked primarily with students who had experienced some problems functioning in a comprehensive school environment.

Philosophically, the alternative schools represented quite different ideologies. Several were informal and personal in nature, but one represented a traditional, back-to-basics orientation. None was ultra-liberal or ultra-conservative. Two of the schools had highly structured behavior modification programs. All the alternatives were available to students by free choice.

The schools, by design, did not constitute a homogeneous group. A wide range of differences existed within each set although the comprehensive high schools, perhaps predictably, were more alike than were the alternatives. Altogether, 459 alternative school students and 104 of their teachers participated in the study, while 622 conventional school students and 379 of their teachers did so.

Our Findings

Perhaps the simplest way to begin a presentation of our major findings is to start with just two schools: one alternative school and one conventional school.

The student scores for these two schools were about what we had expected to find (see Figure 1). We had visited and worked with a variety of alternative schools for several years. The fruits of simple but powerful ideas such as choice and variety had repeatedly impressed us. Also, in an earlier study of interview data collected from students and teachers in alternative schools, we found evidence of environmental characteristics that differed considerably from those usually associated with conventional schools.[6] Consequently, we suspected that most alternative schools would satisfy students' needs better than most conventional schools.

Nevertheless, the results depicted in Figure 1 are startling because these are not two "typical" schools. Rather, they are the *lowest*-scoring alternative school and the *highest*-scoring conventional school, as judged by their students. In other words, students in the alternative schools were much more satisfied with how well their schools were meeting their needs than were students in the conventional schools. This generalization is demonstrated clearly by the means of the two groups of schools, also shown in Figure 1.[7]

The differences in comparable scores for teachers in these same two schools, displayed in Figure 2, are *very large*. The teachers in the *lowest*-scoring alternative school are far more satisfied with their success in meeting students' needs, especially on the top three scales in the hierarchy, than are their counterparts in the highest-scoring conventional school. It is important to understand that the highest- and lowest-scoring schools were selected on the basis of student scores; they are not the highest and lowest schools as judged by teachers. Indeed, the teachers in this one conventional school are actually below the mean for the entire conventional school group on every scale; the alternative school's teachers are appreciably below the mean of their group on only one scale. The differences in mean scores between the two kinds of schools on the top three SAS scales are all statistically significant ($p < .05$). These results are summarized in Table 1.

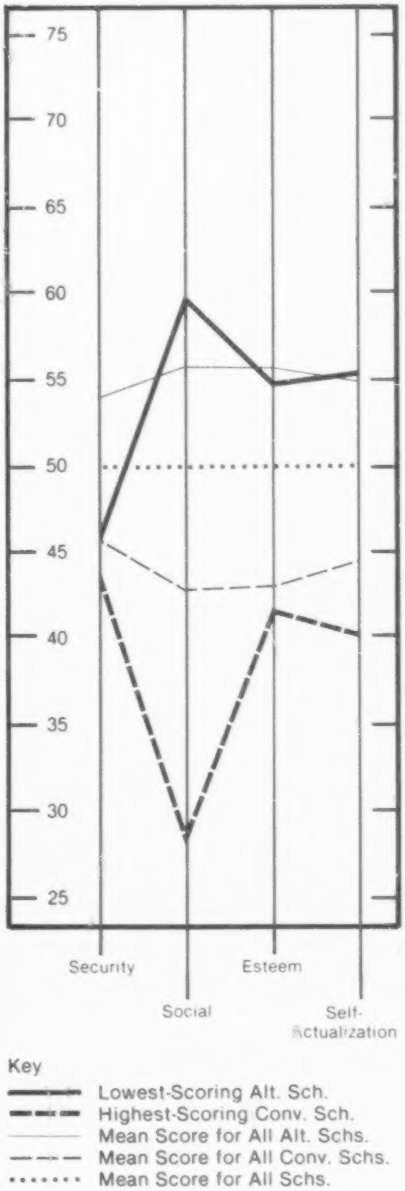
Clearly, as Table 1 demonstrates, alternative school students and teachers report that their schools are doing a better job of meeting the higher-level needs of their students. However, the most intriguing finding is the lack of significant differences between the two types of schools in meeting security needs. Alternative schools have long been accused of placing too little emphasis on order, control, and stability. Our data do not support this criticism.

Table 1. Results of Analyses of Variance of Differences in Adjusted Needs Satisfaction Scores for Both Students and Teachers in Conventional and Alternative Schools

SAS Scale	Group	Conv. Schs. (N = 6)		Alt. Schs. (N = 7)		F(1,22)	p
		$\overline{X}$	S.D.	$\overline{X}$	S.D.		
Security	Students	47.4	11.6	52.2	8.7	1	N.S.
	Teachers	45.8	10.3	53.6	8.8	2.02	N.S.
Social	Students	41.0	5.7	57.7	4.8	19.87	.01
	Teachers	43.2	8.7	55.8	7.1	11.42	.01
Esteem	Students	41.4	6.3	57.4	5.3	17.05	.01
	Teachers	43.3	4.4	55.7	10.0	10.25	.01
Self-Actual.	Students	41.8	6.1	57.0	6.8	12.49	.01
	Teachers	44.4	4.9	54.8	11.0	5.87	.05

Figures 3 and 4 complete our sketch of these 13 schools. Figure 3 displays the areas bounded by the extreme scores on each scale for each group of schools as judged by students. In other words, every school's score on every scale falls somewhere in the shaded area for its group. We find the absence of overlap remarkable. Even in the area of security, the presumed weak point of alternative schools, there is little overlap.

Figure 2. Comparisons of Teachers' Judgments in the Lowest-Scoring Alternative and the Highest-Scoring Conventional Schools (as Judged by Student Scores)*



*Readers should note that highest- and lowest-scoring schools were selected according to student judgments; they are not the highest- and lowest-scoring schools as judged by teachers.

Figure 4 summarizes similar data for teachers. Here more overlap occurs between the two types of schools. Teachers in some conventional schools we examined are more satisfied with the degree to which they are meeting at least some of their students' needs than are teachers in some alternative schools. Generally, however, alternative school teachers are clearly more satisfied with the job they are doing in this important area. Some of the lower scores among alternative school teachers seem to be caused not so much by low estimates of what the school is actually doing as by the inordinately high ideals the teachers in some alternative schools hold.

What is the explanation for these differences in levels of satisfaction? Other data, not reported here, indicate that alternative and conventional school students share a common ideal of the degree to which schools ought to be helping them grow as human beings. Teachers in the two kinds of schools also generally agree about what their schools should be doing to meet students' needs. Alternative schools have a clear and impressive edge, however, in the extent to which actual practice matches the ideals held.

What accounts for these dramatic contrasts in public schools? Is the SAS biased toward alternative schools? We think not; during an early stage of development of the instrument, items were included or omitted on the basis of reactions of both

Figure 3. Comparison of the Complete Distribution of Scores For All Alternative and All Conventional Schools (as Judged by Students)

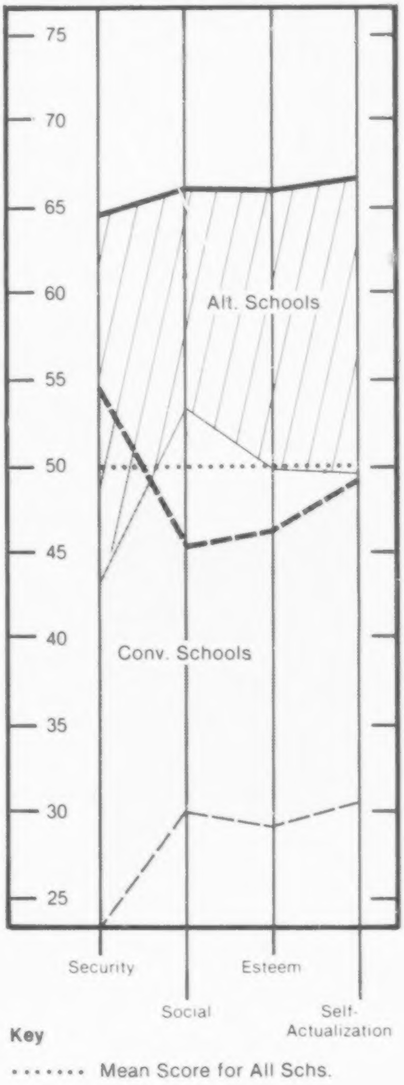
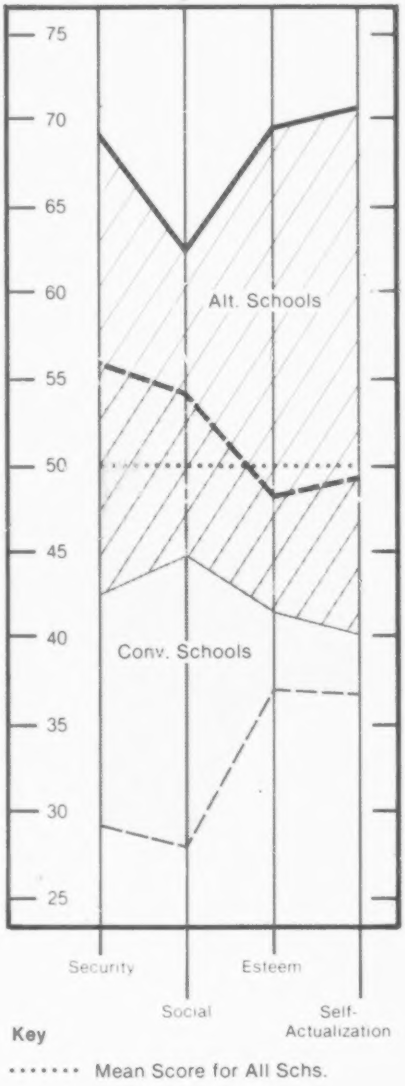


Figure 4. Comparison of the Complete Distribution of Scores For All Alternative and All Conventional Schools (as Judged by Teachers)



alternative and conventional school teachers.

Is school size one of the explanatory factors? The evidence, though limited, does not suggest this. One of the highest-scoring schools in the alternative sample was a very large back-to-basics school. However, all the conventional schools were large, and size of school remains a potentially confounding variable. This back-to-basics alternative school also tends to dispel the notion that informality is a factor since, in our judgment, the school was more highly structured than any of the conventional schools we visited.

Was our sample of conventional schools unusually weak? No, we think that most observers would find that the conventional schools we studied have sound, even above-average programs. Several have reputations that encourage people to locate in their communities because of the quality of the schools. They are, by most measures, good schools.

Are the alternatives we examined unusually strong? One or two have very good reputations, but this factor seemed to have little bearing on their ranking. A disinterested observer would not be likely to identify the high-scoring alternatives through typical observation techniques because of large differences in philosophy, structure, program, and administration.

Are we really measuring something else — perhaps permissiveness? Again, we point to the high scores of the back-to-basics alternative school. We also compared the responses of teachers and students who judged their school "strict" with those who judged it "relaxed." The differences were not significant on this variable ($p > .05$).

Are we simply picking up a Hawthorne effect in a group of relatively new programs? Definitely not; three of the alternative schools are about 10 years old, placing them among the first such schools established in the U.S. In addition, we looked at the effect of length of tenure (for both students and teachers) in both kinds of schools. Again, we found no significant differences. In all the above areas, as well as several others we have not discussed, the data hold up under the severest scrutiny we have been able to bring to bear.

We really cannot identify a *cause* for such differences since our study was not designed to establish causality. There is, however, only one variable that *all* the alternatives have in common: free choice. Teachers and students have freely chosen to work and study in these schools. The "ownership" of and identification with these schools that seem to result from the simple act of choosing is the variable to which we are most inclined to attribute the large differences we found, but this conclusion must remain speculative for now.

Again, we did not expect such marked differences between these two groups of schools. We found very large differences in the degree to which the 13 schools meet students' needs for friendship and belonging, for achievement, and for self-actualization and personal growth. Alternative school students were far more satisfied with their growth opportunities in these three areas than were conventional school students. In addition, they were as satisfied as their conventional school counterparts with the amount of control and order in their schools.

Teachers in alternative schools share with their students the view that their schools are more successful in meeting students' needs, but little has been said about what these schools do for teachers. In a recent *Kappan* article James Lytle concluded that one alternative school, the Parkway Program in Philadelphia, was highly regarded as a workplace by its teachers because it provided more of the working conditions teachers value than do most schools.[8] Just as they are for many students, alternative schools seem to be more sensible, productive environments for many teachers. Our data suggest that many teachers now working in and committed to conventional schools would be likely to experience more success in alternative environments.

This study shook a number of our convictions about schooling. Schools need not be small to meet students' needs. They need not be informal. Indeed, the type of program or instructional format does not seem to make a difference in meeting human needs. As we mentioned earlier, the only characteristic of alternative schooling that seems to hold up throughout our data is the concept of free choice. Common sense leads one to conclude that individuals are more likely to value and see merit in programs they elect to attend than in those imposed upon them. But it's a good deal harder to understand why alternative school programs, which actually put into practice this concept of free choice that is central to our society, are still more likely to be viewed as aberrations to be ignored rather than as exemplars to be emulated.

"What kind of field trip is this, anyway?"

---

1. Abraham Maslow, *Motivation and Personality*, 2nd ed. (New York: Harper and Row, 1970).

2. For examples, see: Herbert Walberg, "Social Environment as a Mediator of Classroom Learning," *Journal of Educational Psychology*, December 1969, pp. 443-48; Joe M. Steele, Ernest R. House, and Thomas Kerins, "An Instrument for Assessing Classroom Climate Through Low-Inference Student Judgment," *American Educational Research Journal*, May 1971, pp. 445-66; R. L. Sinclair, "Measurement of Educational Press in Elementary School Environments," paper presented at the annual meeting of the American Educational Research Association, Los Angeles, 1969; Joyce L. Epstein and James M. McPartland, "The Concept of the Measurement of the Quality of School Life," *American Educational Research Journal*, Winter 1976, pp. 15-30.

3. Epstein and McPartland, op. cit.

4. The actual procedure requires individuals to sort 40 statements into five piles labeled: almost always fits my school, often fits my school, occasionally fits my school, seldom fits my school, and almost never fits my school. The statements are assigned a score ranging from five points (almost always) to one point (almost never). Scale scores are then calculated from the assigned values.

5. The adjusted score was derived from a simple regression equation for students and a separate regression equation for teachers. The ideal school means served as the predictor variable and the actual school mean as the criterion variable. Residual scores are calculated for both students and teachers in each school.

6. Gerald R. Smith, Marion McCollum, and George Barclay, "Student and Teacher Perceptions of the Operative Values of Public Alternative High Schools," paper presented to the Fourth Annual H. L. Smith Research Conference, Indiana University, Bloomington, 1979.

7. Note that, when using standard scores, the line on each graph representing a score of 50 is the mean for the entire group of 13 schools.

8. "An Untimely (but Significant) Experiment in Teacher Motivation," *Phi Delta Kappan*, June 1980, pp. 700-702.

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May 1981

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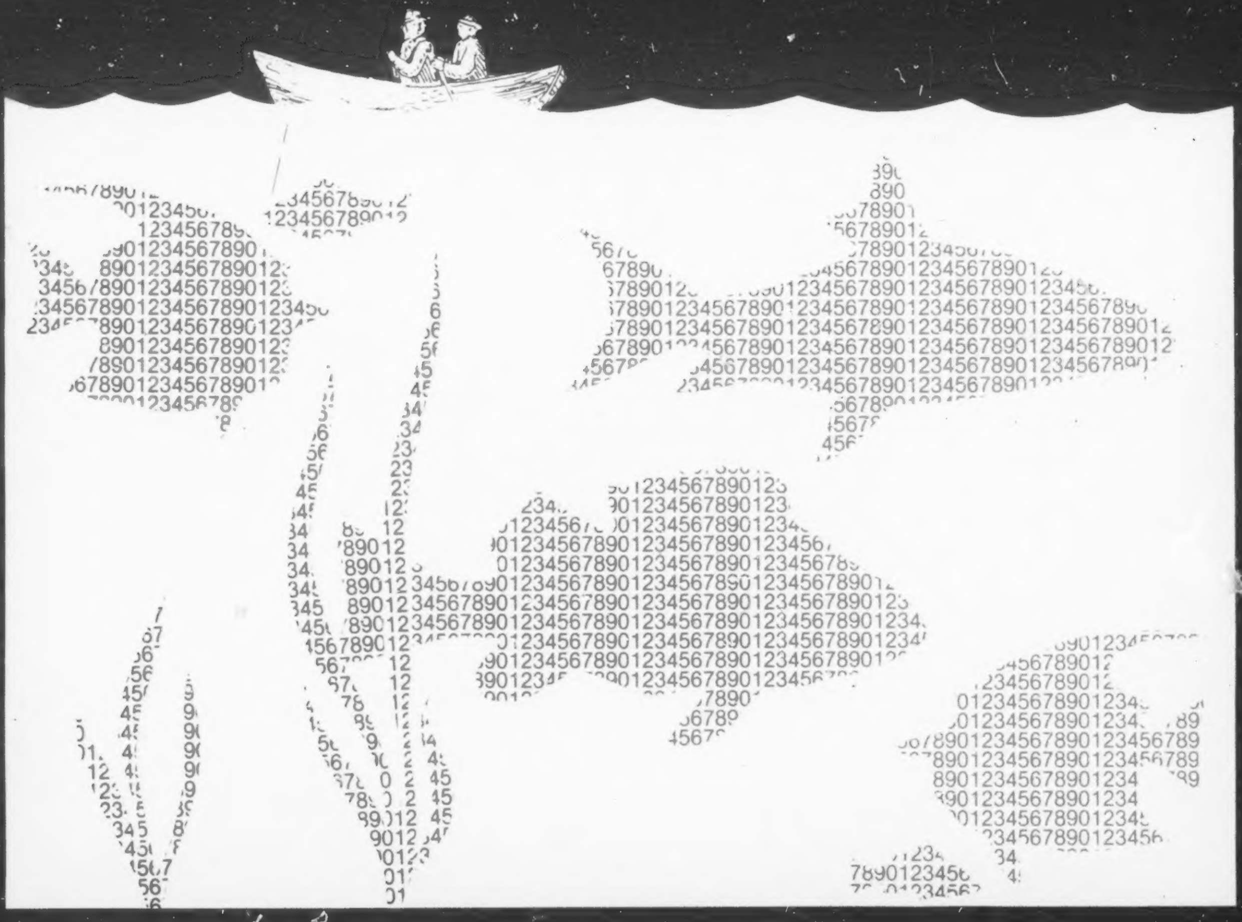
Standardized Test Scores: Are We Throwing Back The 'Catch'?

A Minisection on Preparing For Enrollment Declines

A Debate on Learning Styles



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order to give gifted students time for enrichment activities. Interested readers will find details on all revolving-door materials in *A Guidebook for Developing Individualized Educational Programs for Gifted and Talented Students.*[6]

Advantages of the Model

Since the resource teacher never has more than a fixed number of students working under his or her direction at any given time, the teacher can maintain the close contact and provide the individual attention that intensive student work demands. The primary difference between the revolving-door approach and the traditional method (i.e., keeping the same students in the resource room for the entire year) is that youngsters in a revolving-door situation have a specific reason for being in the resource room for a given period. This reason becomes the focus of the supplementary services that are provided by the resource teacher. In a similar fashion, the child's special project becomes the vehicle through which we monitor his or her progress and evaluate the effectiveness of our own efforts. Enrichment experiences are provided to talent pool students on a regular basis throughout the year to stimulate interests which may then be pursued in depth in the resource room.

The revolving-door approach to identification of and programming for the gifted also helps to insure continuous involvement of regular classroom teachers. The regular classroom and the special program cannot operate as two separate entities. The regular classroom teacher must be constantly alert for signs in students of interest, creativity, task commitment, or special ability. Besides becoming more sensitive to signs of special talent in students, regular classroom teachers can often provide certain types of classroom enrichment experiences that actually become part of the identification process.[7]

In a sense, the revolving-door approach means that a child "earns" the opportunity to obtain special services by showing some or all of those traits research has associated with giftedness: above-average ability, task commitment, and creativity. The idea of "earning" the opportunity to obtain special services will no doubt prove controversial. It seems equally certain that the revolving-door approach will help to overcome some valid criticisms of the traditional method of identifying the gifted.[8]

"Earning the right" is simply a more forceful way of expressing the old education cliché, "showing a need." However, the revolving-door approach shifts from the traditional method — the making of decisions solely from such status information as test scores and teacher ratings — to a more defensible model that augments status information with certain kinds of action information.

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[1] Joseph S. Renzulli, "What Makes Giftedness? Reexamining a Definition," *Phi Delta Kappan*, November 1978, pp. 180-84 ff.

[2] A systematic procedure for compacting and streamlining the regular curriculum can be found in Joseph S. Renzulli and Linda H. Smith, *A Guidebook for Developing Individualized Educational Programs for Gifted and Talented Students* (Mansfield Center, Conn.: Creative Learning Press, 1979).

[3] Joseph S. Renzulli and Linda H. Smith, *The Strength-A-Lyzer* (Mansfield, Conn.: Creative Learning Press, 1979).

[4] Joseph S. Renzulli and Linda H. Smith, *The Management Plan for Individual and Small-Group Investigations of Real Problems* (Mansfield Center, Conn.: Creative Learning Press, 1977).

[5] Joseph S. Renzulli and Linda H. Smith, *The Compactor* (Mansfield Center, Conn.: Creative Learning Press, 1979).

[6] Renzulli and Smith, *A Guidebook . . .*, op. cit.

[7] See Joseph S. Renzulli, *The Enrichment Triad Model: A Guide for Developing Defensible Programs for the Gifted and Talented* (Mansfield Center, Conn.: Creative Learning Press, 1977). Two of the three types of enrichment activities are clearly recommended for all children and can easily take place in the regular classroom.

[8] Dorothy Weiler, "The Alpha Children: California's Brave New World for the Gifted," *Phi Delta Kappan*, November 1978, pp. 185-87. ☐

Presidents Rate Their Duties For Time, Importance, and Stress

by Jerry Duea

The final installment in a three-part series, this article examines how college presidents spend their time and the stress associated with their duties. Mr. Duea compares the presidents' perceptions to those of school superintendents.

This third and final installment of the report on the PROBE Institutional President Survey offers answers to questions concerning the amount of time college and university presidents devote to specific responsibilities, the relative importance they attach to these responsibilities, and the stress associated with them. I shall also compare presidents' job perceptions to those of school district superintendents.[1]

We identified for study six categories of job-related responsibilities: 1) alumni affairs and fund raising, 2) planning and administering the budget, 3) personnel tasks (recruitment, negotiations, etc.), 4) governing-board relations, 5) program development and improvements, and 6) student affairs. We also established a nonspecific category, "other," which included such responsibilities as public relations and civic affairs, general/routine administration, administrator/faculty relations, and long-range planning.

We examined these administrative tasks from three different perspectives: 1) the amount of time devoted to each task, 2) the importance attached to each task, and 3) the potential stress associated with each task. We asked the presidents to rank-order each of the tasks according to the amount of time it requires. The presidents also rated the importance and the

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Table 1. College and University Presidents' Ratings of Administrative Tasks According to Institutional Sponsorship

Task	Time Consumed			Task Importance			Stress Potential		
	Number of Responses	Mean Rank*	Absolute Rank	Number of Responses	Mean Rating**	Rank	Number of Responses	Mean Rating**	Rank
Public Institutions									
Alumni affairs and fund raising	183	4.95	7	175	3.41	7	158	2.54	7
Planning and administering the budget	186	2.47	1	178	4.44	1	163	3.80	1
Personnel tasks (recruitment, negotiations, etc.)	184	3.18	4	176	4.06	4	160	3.61	3
Governing-board relations (regents, trustees, legislative groups, etc.)	185	3.08	3	177	4.28	3	161	3.71	2
Program development and improvements	186	2.84	2	180	4.28 +	2	163	3.07	5
Student affairs	181	4.66	6	176	3.69	6	159	3.01	6
Other***	35	3.69	5	34	3.97	5	35	3.40	4
Private Institutions									
Alumni affairs and fund raising	286	2.57	1	289	4.28	2	271	3.52	3
Planning and administering the budget	286	3.03	2	276	4.19	4	266	3.66	1-2
Personnel tasks (recruitment, negotiations, etc.)	280	3.66	6	273	3.69	6	256	3.66	1-2
Governing-board relations (regents, trustees, legislative groups, etc.)	282	3.39	4	284	4.26	3	261	3.24	5
Program development and improvements	289	3.31	3	290	3.95	5	270	2.85	6
Student affairs	273	5.04	7	269	3.49	7	253	2.80	7
Other***	51	3.49	5	57	4.35	1	58	3.48	4

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*On a scale of 1 to 7.

**On a five-point scale with five being high.

***Most frequently mentioned tasks were: public relations and civic affairs, general/routine administration, administrator and faculty relations, and long-range planning.

stress potential of each task on a five-point scale.[2]

As was true of their views on critical issues (April *Kappan*), administrators' ratings of their job responsibilities were strongly influenced by their institutional funding sources. Thus the only meaningful comparisons we can make are those between administrators of public and administrators of private institutions. The results appear in Table 1.

Except for two areas of responsibility, the rankings of the various tasks in terms of time consumption were consistent among all college and university presidents. Administrators of public and private institutions differed substantially only on alumni affairs and fund raising, which ranked seventh in time consumption for public institutional representatives and first for private institutional presidents, and personnel tasks, which ranked fourth for presidents of public institutions and sixth for presidents of private institutions.

Similar disparities were evident in the ratings of job priority and stress potential. Alumni affairs and fund raising, ranked seventh in both importance and stress potential by public institutional presidents, was ranked second in both areas by presidents of private institutions. However, the two groups agreed that planning and administering the budget produced the greatest amount of stress.

Prior to statistical examination, the group mean ratings were converted to standard scores to eliminate contamination by group rating biases. Orthogonal t ratio comparisons revealed that the presidents of public colleges and universities placed significantly higher priorities than private school counterparts on three areas: 1) planning and administering the budget, 2) personnel tasks, and 3) program development and improvements. Presidents of private institutions, by contrast, placed significantly higher priority only on the area of alumni affairs and fund raising. (In all instances, $p < .01$.)

Similar comparisons of stress potential ratings revealed only two differences between the groups that were significant at the .01 level. Presidents of public institutions associated greater stress with governing-board relations, and presidents of private institutions associated greater stress with alumni affairs and fund raising.

We were unable to make meaningful comparisons between the college and university presidents and the public school superintendents in two task areas. "Alumni affairs and fund raising" is not an exact substitute for "public relations," the job area about which we surveyed the superintendents. We were also unable to make comparisons in the "other" category, because the presidents' responses differed too much from those of the superintendents. The task evaluations of superintendents are shown in Table 2.[3]

Rank difference correlations (Spearman's rho) between the task evaluations of the two groups of presidents and the two groups of school superintendents lend additional support to the notion that institutional sponsorship status powerfully influences the time spent on tasks, the perceived importance of those tasks, and the stress associated with them. In all three

". . . [M]ore time, higher priority, and greater stress are . . . associated with tasks closely connected to fiscal matters and funding sources."

areas stronger relationships existed between the publicly sponsored institutions (colleges and school districts) than between the two groups of college and university presidents.

Correlations between the ratings of presidents of private institutions and those of presidents of public institutions and randomly selected superintendents were extremely low. In the area of job priorities the correlations were negative. One virtually unexplainable finding did arise, however. The ratings (both on time consumption and on task importance) of superintendents of large school districts have more in common with those of presidents of private colleges and universities than with the ratings of either public college and university presidents or superintendents of other public school districts.

A high degree of similarity among all four groups was found in the amount of time devoted to five administrative areas: budgetary responsibilities, personnel tasks, governing-board relations, program development, and student affairs. The only major exception was that the randomly sampled superintendents (heavily weighted in favor of small districts) devoted considerably more time to personnel tasks than did the college and university administrators.

Our findings show that more time, higher priority, and greater stress are generally associated with tasks closely connected to fiscal matters and funding sources.

Student affairs proved to be another matter. Public college and university presidents rated this task sixth in time consumption, importance, and stress. Private institutional representatives rated student affairs seventh in all three areas. The low position occupied by student affairs should not be interpreted as evidence of a lack of concern for students. Staffing patterns generally characteristic of such institutions often include a dean of students or a vice president for student affairs, charged with responsibility for student-oriented functions. However, as enrollment decline continues and the competition for students mounts, presidents may find it necessary to play a more active part in student affairs. Greater involvement with students on the part of top administrators could conceivably give their institutions an edge in the competition for students and improve retention rates.

Due to the contaminating influences of funding sources, few comparisons could be drawn between subgroups on factors other than sponsorship status. In no instance could the colleges be compared to universities, because most of the universities in our sample were public and the colleges private. However, one significant sex-linked variable was discovered: The limited number of female presidents who participated in the survey (only 66 of 544) associated less stress with student affairs than did their male counterparts. The only significant sex-linked variable among public school superintendents' ratings was the fact that female superintendents associated greater stress with public relations.

The findings of the two PROBE surveys of public school superintendents and the presidents of institutions of higher education suggest a number of areas that should be stressed in training and inservice programs that prepare these two groups of administrators. Here are five such recommendations:

1. Training programs should pay special attention to time management skills to prepare administrators for various administrative responsibilities that will compete for their time and energy.
2. Those responsible for designing administrative training programs must continually reexamine and improve upon program components related to budget planning and administration. Skills appropriate to managing enrollment decline and its fiscal consequences are especially needed at this time.
3. All groups of administrators need effective training in the use of both traditional and nontraditional funding sources. Increased attention needs to be given to public relations activities, grant procural and management, and endowment and fund raising. Certainly all presidents of colleges and universities need to be adept in each of these areas. Public school superintendents, by contrast, could benefit from mastering the prudent and effective use of industry and community groups as sources of supplemental funds.
4. Training programs should also emphasize the organizational and political skills necessary for forging effective working relationships with lay boards. Too frequently aspiring administrators are trained in the areas of business management, curriculum development and supervision, and personnel administration but are left to their own devices in developing positive working relationships with their governing boards.
5. Finally, constant attention needs to be paid to improving personnel management skills, particularly in view of enrollment decline and the attendant fiscal pressures.

Table 2. Administrative Task Evaluations by Random-Sample and Large-District Superintendents

	Random Sample			Large Districts		
	Time	Importance	Stress	Time	Importance	Stress
Administrative Tasks	Rank	Mean Rating*	Mean Rating*	Rank	Mean Rating*	Mean Rating*
Public relations	6	3.81	3.20	4	3.86	3.37
Planning and administering the budget	2	4.00	3.30	3	4.01	3.36
Personnel tasks (recruitment, negotiations, etc.)	1	3.90	3.73	6	3.68	3.54
School-board relations/activities	3	3.99	3.62	1	4.19	4.05
Program development and improvements	4	3.86	2.92	2	3.93	2.85
Student affairs	7	3.34	2.71	7	3.11	2.63
Other administrative tasks**	5	3.28	3.86	5	4.07	3.85

*On a five-point scale with five being high.

**Other tasks identified most frequently were: office routine and government reports, transportation and physical plant concerns, staff development, legal affairs, and administrative supervision.

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1. Other results of the survey of public school superintendents were reported in Jerry Duea and Walter L. Bishop, "Important Differences in Public and Professional Perceptions of the Schools," *Phi Delta Kappan*, September 1980, pp. 50-52.

2. I was especially concerned that the ratings be independent enough to allow me to draw tenable conclusions. Correlation coefficients (Pearson's r) on these two ratings ranged from .1977 to .5313. The coefficients of determination (r^2) for the various tasks ranged from .0391 to .2823 (median r^2 = .1217), indicating that in no instance was as much as 30% of the variance in the stress ratings accounted for by the variance in importance ratings.

3. Two samples of public school superintendents were surveyed in the PROBE study. One sample was randomly selected; the other comprised only the 200 largest school districts in the U.S. (with 133 responding). For additional findings of this survey see Duea and Bishop, op. cit. □

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JUNE 1981

Diane Ravitch

The Coleman Report: How Good Is the Bad News?

Bumstead/Pipho

School Funding:
Widespread Austerity, Occasional Abundance

A KAPPAN Special Section

International Education

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RESEARCH NOTES

Chicago Students and Parents Accept Integration, Reject Busing

by Earl J. Ogletree and Stanley S. Starkman

After a decade of unsuccessful efforts to devise a plan for school desegregation that would satisfy the community and meet federal guidelines, the Chicago School Board and then-Secretary of Education Shirley Hufstedler negotiated a new desegregation plan in the form of a consent decree. The plan gives the board wide discretion in using a variety of voluntary and mandatory desegregation measures — zoning, pairing of schools, grade structuring, clustering, and busing. The plan also stipulates that the community, through public hearings, play a major role in determining the measures to be adopted.

Because community participation is central to the new Chicago plan, we surveyed 1,040 public school students in grades 7 to 12 and 547 parents to determine their attitudes toward a variety of desegregation measures. The parents and students in our sample represented the three largest ethnic and racial groups in Chicago, but not proportionally. The school population of Chicago is 60% black, 19% white, and 16% Latino. Forty-two percent of the parents we surveyed were black, 12% white, and 46% Latino; 55% of the students were black, 12% white, and 33% Latino. Some of the major findings are shown in Table 1.

Our data showed no significant differences among the three ethnic groups in our sample. We also found little difference between the students' and the parents' responses. Most respondents favored voluntary integration because they felt it would improve race relations, but they opposed busing and mandatory integration of any kind.

The majority of students and parents, regardless of race, favored neighborhood schools; only blacks favored busing of other ethnic or racial groups into their schools. No group wanted to be the one chosen to be bused. However, 69% of students indicated a willingness to be bused to a good school in a good community; 77% of the parents opposed even such busing.

Our findings suggest that the courts will have less influence in the future about the means of implementing school desegregation. In communities such as Chicago, where the approved desegregation plan includes a large measure of community input and allows for flexibility on the part of local boards, court-ordered busing for purposes of desegregation has a dim future. ☐

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Table 1. Attitudes of Chicago Students and Parents Toward School Desegregation

Issue*	Students' Responses (N = 1,040)			Parents' Responses (N = 547)		
	Yes %	No %	Don't Know %	Yes %	No %	Don't Know %
Favor school integration	56	29	15	55	38	8
Favor voluntary integration	58	28	14	60	34	8
Favor mandated integration	10	74	15	14	76	10
Favor attending neighborhood school	72	20	8	68	17	15
Favor busing for integration	26	62	12	26	65	9
Integration will improve achievement	33	37	30	28	46	25
Integration will improve race relations	64	18	19	51	33	17
Busing will make schools better	29	41	30	18	57	25
Would like to be (or have children) bused into a racially different school	18	68	15	30	58	12
Would move out of city to avoid being bused	17	64	19	18	65	17
Would transfer to a private school to avoid being bused	26	55	19	34	49	17
Teachers should be of same race as students	16	70	14	15	73	12

*The data in this table cover only 12 of 32 questions for which this survey sought answers.

School's Racial Mix Can Affect Teacher Attitudes

by Kathryn L. E. Rabinow and James M. Cooper

The racial mix of the school population significantly affects teachers' attitudes toward their own teaching skills and the adequacy of their training, with white teachers somewhat more affected than black teachers. These findings stem from our survey of 79 black and 184 white teachers (a 76% return rate) from 26 randomly selected elementary schools in East Baton Rouge Parish, Louisiana.

We found that white teachers teaching in predominantly white schools had a significantly more positive view of their teaching effectiveness and of their students' attitudes than did white teachers in black or desegregated schools ($p < .01$).* Black teachers teaching in black schools,

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*We defined black schools as those having more than 90% black enrollment and white schools as those having more than 90% white enrollment. Schools falling between these extremes we considered desegregated.

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Interracial Interaction and Social Marginality

by Benjamin J. Roberts

The interaction of black students with white students tends to increase as the percentage of white students in a given school rises from very low through intermediate levels. However, the amount of interaction levels off or declines as the proportion of whites becomes larger and as the situation for black students becomes increasingly marginal. These findings emerged from an examination of the responses of 898 black high school students to five questions selected from a 1975 Educational Testing Service survey.

The questions I selected examined the quality and frequency of interaction between blacks and whites in school. Students were asked: 1) the race of the three students they talked with most often, 2) whether they ever helped a student of another race with schoolwork, 3) whether they ever asked for help with schoolwork from a student of another race, 4) how often they played on a team with a student of another race, and 5) how often they were assigned to work in school with a student of another race.

I divided the responses into four categories according to the percentage of white students in the schools: low (0 to 25%), medium (26%-50%), high (51%-75%), and predominantly white (75% or more). The responses were further subdivided according to sex.

Males and females differed considerably in their responses to the question about the three students they talked with most often. Twenty-nine percent of the black males in low-white schools said they often talked with white students. This number rose to 36% and 38% in schools with medium and high numbers of white students respectively. However, only 31% of black males in predominantly white schools listed a person of another race as one of the three they talked with most often. Female responses to the same question increased sharply from 13% to 31% as the percentage of whites rose from low to medium; this rate of increase was not sustained as the proportion of white students rose to higher levels, however.

The percentage of black males who said they had helped whites with schoolwork was highest in schools with medium numbers of white students and in predominantly white schools (both 73%) but was lower in other types of schools. Thus no consistent pattern of rising, falling, or leveling off was evident for black males on this question. However, the percentage of black females who said they had helped white students with schoolwork leveled off as the proportion of whites in the school rose. Positive responses came from 49% of black females in low-white schools, 64% in medium-white schools, and 69% and 68% in high- and predominantly white schools.

The number of times black students of either sex said they had asked a white student for help with schoolwork first rose, then dropped, as the proportion of whites in the school increased. In the only statistically significant difference between the sexes in the sample, 39% of black males responded positively in low-white schools, 62% in medium-white schools, 48% in high-white schools, and 41% in predominantly white schools. By contrast, 62% of black females said they had asked white students for help in high-white schools, and 58% said they had done so in predominantly white schools. The leveling-off effect among black males occurred at significantly lower enrollments of white students than it did among black females.

The number of black males who had played sports with whites rose as the percentage of whites in the school increased, but again the rate of increase fell at the high end of the scale. Although the percentages were lower for black females in all types of schools, they showed essentially the same pattern as did males.

The by-now familiar leveling-off effect showed up again in the number of times black students said they had been assigned to work with white students. For both males and females, the number of blacks who had been assigned to work with white students rose sharply at lower proportions of whites, leveled off as the proportion of whites increased, and dropped in predominantly white schools.

One possible explanation for the counter-intuitive findings of this study may be the effect of social marginality.[1] When blacks make up a majority or a significantly large minority of the school population, they may not feel that their group identity is threatened by mixing with whites. However, when their numbers shrink — especially below one-quarter of the school population — their interaction with whites is reduced, and they tend to band together with members of their own primary reference group[2] to protect their sense of group identity.

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[1] Everett V. Stonequist, *The Marginal Man* (New York: Charles Scribner's, 1937).

[2] Muzafer Sherif and Carolyn W. Sherif, *Social Psychology* (New York: Harper & Row, 1969). Sherif and Sherif define a reference group as a group to which a person relates himself/herself as a member or aspires to relate himself/herself psychologically. ☐

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Competency-Based Teacher Education In AACTE Institutions: An Update

by Walter S. Sandefur III and Willis L. Nicklas

Member institutions of the American Association of Colleges for Teacher Education (AACTE) are showing some leveling off of interest in competency-based teacher education (CBTE). There is also a trend toward stabilizing successful CBTE programs. These conclusions come from our summer 1980 follow-up of 1975 and 1977 surveys of AACTE institutions.[1]

All 787 AACTE institutions received questionnaires in 1980. Seventy-nine percent (618) responded. Of these, 59% said they were operating programs that could be characterized "for the most part" as CBTE, compared to 58% of responding institutions in 1977, 52% in 1975, and 16% in Allen Schmieder's 1973 survey.[2]

Despite the general tendency toward greater involvement in CBTE, we found in 1980 a noticeable leveling off of interest in this approach. More institutions were not involved or were not planning to begin CBTE programs in 1980 (41%) than in 1977 (29%) or in 1975 (17%). Moreover, fewer institutions were exploring CBTE approaches in 1980 (14%) than in either 1977 (26%) or 1975 (47%). These findings are not surprising, since many institutions that previously reported plans to begin CBTE programs have by now either implemented or abandoned them.

The number of AACTE institutions operating small-scale CBTE programs has remained relatively constant: 44% in 1975, 49% in 1977, and 46% in 1980. However, a few more institutions were operating full-scale CBTE programs in 1980 (13%) than in either 1977 (9%) or 1975 (8%).

Seventy-three percent of 1980 respondents said that their institutions had developed CBTE programs without outside funding. Of the institutions that did use outside funding, only 3.4% indicated that a substantial amount of money from outside sources is still available.

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Of the 364 institutions that were involved in CBTE in 1980, 55% said their degree of involvement had remained stable since 1977. Fourteen percent reported increased involvement during that period, and 21% said their involvement had decreased. Sixty-seven percent of these institutions plan to continue their CBTE programs at existing levels, 15% plan to increase their programs, and only 4% plan to decrease their involvement in CBTE.

The period between 1973 and 1977 marked the greatest growth in CBTE programs. Our 1980 data indicate that the growth has leveled off and that we can expect the programs now in operation to be maintained at about their current levels. The full findings of the 1980 survey appear in Table 1.

Table 1. Involvement of AACTE Institutions in CBTE Programs in Each State, 1980

STATE/TERR.	No. of Institutions Contacted	Responses: No.	Responses: Pct.	No. of Institutions Not Involved in CBTE	Pct. of Institutions Not Involved in CBTE	No. of Small-Scale Programs in Operation	Pct. of Small-Scale Programs in Operation	No. of Full-Scale Programs in Operation	Pct. of Full-Scale Programs in Operation	No. of Institutions With Small-Scale or Full-Scale Programs in Operation	Pct. of Small-Scale or Full-Scale Programs in Operation
Ala.	21	18	86	7	39	9	50	--	--	9	50
Alas.	1	--	--	--	--	--	--	--	--	--	--
Ariz.	3	3	100	--	--	2	67	--	--	2	67
Ark.	16	15	94	6	40	9	60	--	--	9	60
Calif.	20	16	80	3	19	8	50	6	38	14	88
Colo.	12	9	75	6	67	3	33	1	11	4	44
Conn.	6	3	50	2	67	1	33	--	--	1	33
Del.	2	1	50	--	--	--	--	--	--	--	--
D.C.	7	5	71	3	60	2	40	--	--	2	40
Fla.	11	9	82	1	11	3	33	3	33	6	67
Ga.	21	16	76	2	13	13	81	1	6	14	87
Guam	1	--	--	--	--	--	--	--	--	--	--
Hi.	3	3	100	--	--	2	67	--	--	2	67
Id.	6	6	100	3	50	3	50	--	--	3	50
Ill.	32	26	81	17	65	12	45	2	8	14	54
Ind.	23	18	78	12	67	8	44	--	--	8	44
Ia.	26	22	85	16	73	7	32	--	--	7	32
Kan.	17	11	65	4	36	7	64	--	--	7	64
Ky.	14	11	79	5	45	5	45	--	--	5	45
La.	17	13	76	6	46	3	23	1	8	4	31
Me.	6	4	67	4	100	--	--	--	--	--	--
Md.	13	10	77	7	70	2	20	--	--	2	20
Mass.	22	14	64	5	36	9	64	1	7	10	71
Mich.	22	18	82	3	17	12	67	1	6	13	73
Minn.	24	19	79	9	47	8	42	3	16	11	58
Miss.	9	8	89	5	63	1	13	--	--	1	13
Mo.	30	24	80	16	67	9	38	--	--	9	38
Mont.	7	2	29	1	50	1	50	--	--	1	50
Neb.	15	13	87	5	38	7	54	1	8	8	62
Nev.	2	2	100	2	100	--	--	--	--	--	--
N.H.	5	5	100	4	80	2	40	--	--	2	40
N.J.	16	11	69	7	64	3	27	2	18	5	45
N.M.	3	3	100	2	67	1	33	--	--	1	33
N.Y.	43	34	79	1	3	6	18	27	79	33	97
N.C.	26	17	65	3	18	10	59	4	24	14	83
N.D.	6	6	100	4	67	2	33	--	--	2	33
Oh.	37	31	84	22	71	9	29	3	10	12	39
Okla.	18	14	78	7	50	2	14	1	7	3	21
Ore.	8	8	100	--	--	7	88	1	12	8	100
Pa.	33	27	82	--	--	15	56	8	30	23	86
P.R.	3	2	66	1	50	--	--	--	--	--	--
R.I.	7	2	29	1	50	1	50	--	--	1	50
S.C.	15	11	73	5	45	2	18	2	18	4	36
S.D.	10	8	80	6	75	2	25	--	--	2	25
Tenn.	23	14	61	2	14	11	79	--	--	11	79
Tex.	49	39	80	15	38	25	64	3	8	28	72
Ut.	5	4	80	--	--	2	50	1	25	3	75
Vt.	2	2	100	--	--	2	100	--	--	2	100
V.I.	1	1	100	--	--	--	--	--	--	--	--
Va.	15	10	67	4	40	5	50	--	--	5	50
Wash.	12	11	92	3	27	6	55	3	27	9	82
W.Va.	17	15	88	3	20	9	60	2	13	11	73
Wisc.	26	24	92	14	58	8	33	3	13	11	46
Wyo.	1	--	--	--	--	--	--	--	--	--	--
TOTAL	787	618	79	257	42	284	46	80	13	364	59

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1. Douglas C. Westbrook and Walter Sandefur, "Involvement of AACTE Institutions in CBTE Programs," *Phi Delta Kappan*, December 1975, pp. 276-78; and Walter Sandefur and Douglas Westbrook, "Involvement of AACTE Institutions in CBTE: A Follow-up Study," *Phi Delta Kappan*, May 1978, pp. 633, 634.

2. Allen A. Schmieder, *Competency-Based Teacher Education: The State of the Scene* (Washington, D.C.: AACTE, 1973). ☐

Oft-Cited Study Has Questionable Validity

by Thomas K. Fagan

In March 1969 the *Phi Delta Kappan* published a brief research note headed, "Do Specialists Help Teachers? Most Teachers Don't Think So."[1] The report summarized a study allegedly conducted by the United Federation of Teachers (UFT), showing that teachers had little respect for the work of school psychologists and social workers.

My own recent search for the original source of this study suggests that the study cannot now be validated. Neither the UFT nor the *Kappan* staff have any recollection of the source of the data.

It is not surprising that a small study reported some 12 years ago should be hard to confirm so long after the fact; many of the principals have departed the scene. But references to the conclusions of this study, especially by way of James R. Barclay's citation of the *Kappan* report,[2] have appeared often in the intervening years.

Because the authors of the study cannot be located and the data cannot be verified, any future references to this study or to Barclay's citation of it should reflect the questionable validity of the study. It would be even more appropriate to avoid citing this study altogether, unless positive evidence regarding the source of the data eventually turns up.

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1. "Do Specialists Help Teachers? Most Teachers Don't Think So," *Phi Delta Kappan*, March 1969, p. 417.

2. James R. Barclay, "Descriptive, Theoretical, and Behavioral Characteristics of Subdoctoral School Psychologists," *American Psychologist*, March 1971, pp. 257-80. ☐

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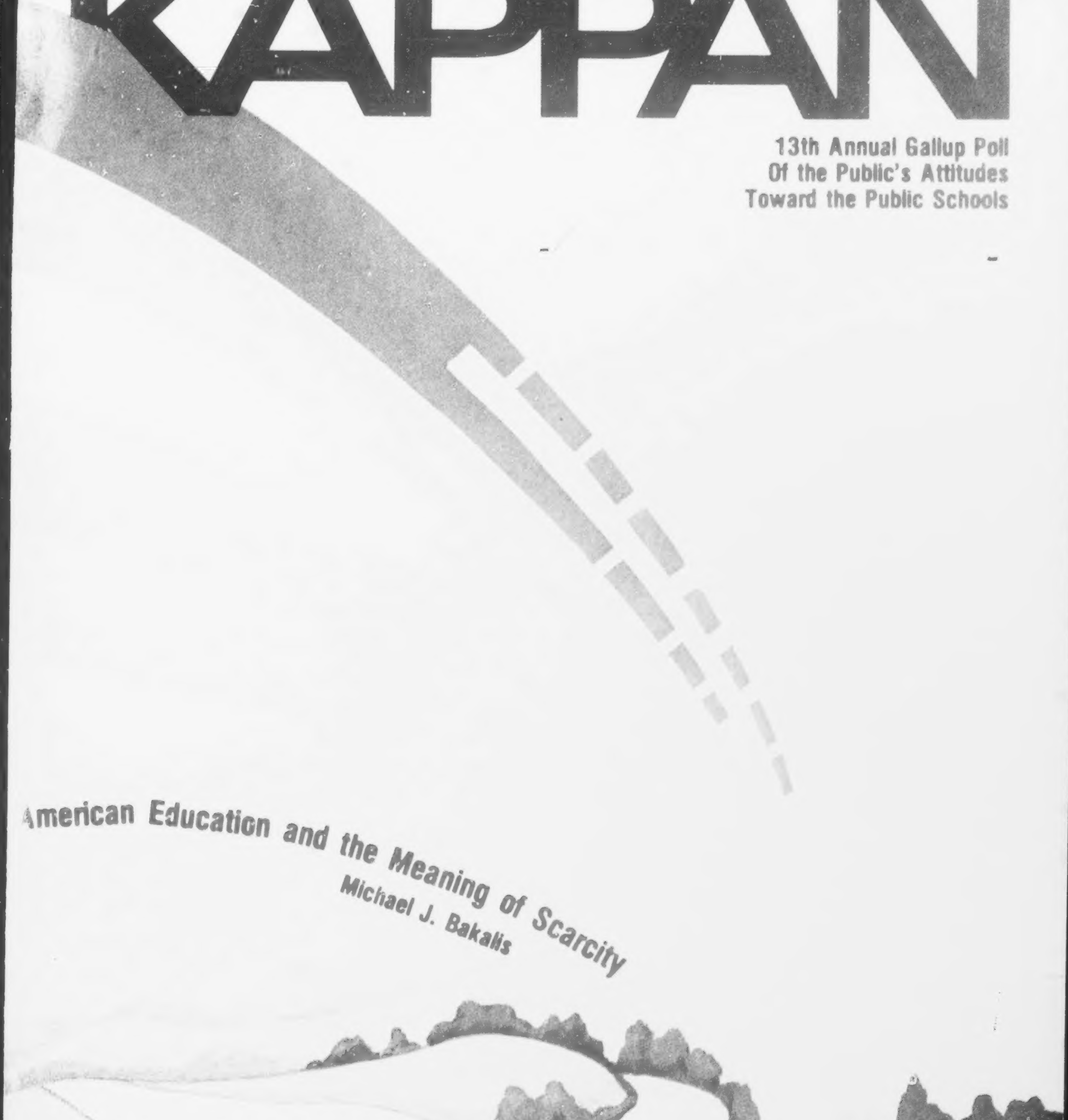
PHI DELTA KAPPAN

September 1981

13th Annual Gallup Poll Of the Public's Attitudes Toward the Public Schools



American Education and the Meaning of Scarcity

Michael J. Bakalis

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High School Seniors' Views Of Themselves and Their Schools:

A Trend Analysis

by Theodore C. Wagenaar

How did the views of high school seniors toward themselves and their schools change during the Seventies? Mr. Wagenaar compares two major studies.

A great many changes in society and in the schools occurred during the Seventies. At the beginning of the decade high school students faced the realities of Vietnam, the Kent State shootings, widespread student activism, the draft, the coalescence of the women's movement, a growing economy, a deemphasis on academics, and a landing on the moon. By the end of the decade a great deal had changed. Military service was voluntary; the economy was stagnating; energy had become scarce and costly. Although the women's movement continued to expand, a move to the political right was under way, and, in education, the rallying cry was "back to basics."

Such momentous changes should be reflected in the experiences and attitudes of high school students, but documenting these effects has generally been difficult. The completion of two nationwide studies of high school students — one undertaken near the beginning of the decade (1972), the other at the end (1980) — makes possible a trend analysis of the views of high school seniors toward themselves and their schools.

Both studies were sponsored by the National Center for Education Statistics, employed longitudinal design, and made use of large stratified random samples, which make it possible to draw conclusions about the entire population of seniors at the beginning and at the end of the 1970s. (All reported values are weighted.)

The *National Longitudinal Study* of the high school class of 1972 was completed by the Research Triangle Institute. Base-year data were gathered from seniors in the spring of 1972, and follow-up surveys were administered in the autumns of 1973, 1974, 1976, and 1979. The base-year questionnaire, which provided the data I used in this study, was administered to 16,683 students in 1,062 schools (typically 18 per school).[1]

The *High School and Beyond Study* of 1980 high school seniors and sophomores was completed by the National Opinion Research Center. Base-year data were gathered in the spring of 1980 from 30,030 sophomores and 28,240 seniors in 1,015 high schools (typically 36 seniors and 36 sophomores per school). I used only the seniors in my analysis.[2]

Academic Issues

Data are available on several aspects of seniors' academic achievements and orientations. The data on standardized test scores show a negligible decline in mathematics scores (from a mean of 12.9 items correct out of 25 possible in 1972 to 12.6 in 1980) and modest declines in vocabulary scores (6.4 to 5.7, out of 15 possible) and reading scores (9.7 to 8.8, out of 20 possible). These figures confirm previous findings regarding a general, if modest, decline in test scores.

If test scores have declined and if teachers are still applying similar standards, we would expect a corresponding decline in grades. But such is not the case. The proportion of students receiving grades of B or better increased slightly between 1972 and 1980 (from 29% to 33%), while the proportions receiving grades ranging from B to C and from C to D declined slightly (from 50% to 47% and from 21% to 19% respectively). The proportion receiving mostly D's or lower remained constant at 1%. Females typically receive higher grades than do males. This finding is curious, given the negligible sex differences in the vocabulary and reading test scores and the small edge for males in mathematics.

Perhaps students in 1980 are receiving higher grades than students in 1972 because they are doing more homework. The data do not support this explanation, however. Although the proportions of students with no homework assigned and of those who do not do their homework declined slightly (from 4% to 3% and from 7% to 4% respectively), the proportion doing fewer than five hours per week increased dramatically, from 54% to 68%. Meanwhile, the proportion doing five to 10 hours per week declined from 30% in 1972 to 18% in 1980, and the proportion doing more than 10 hours per week remained stable at about 6%.

Males are almost twice as likely as females to report that no homework was assigned and nearly four times as likely to refuse to do assigned homework. For both variables, however, the percentages were low. Females, on the other hand, are much more likely than males to do more than five hours of homework per week. Hence females are more likely to complete homework assignments, and this may explain their tendency to earn higher grades than males.

Perhaps students in 1980 received higher grades, despite doing less homework, because their study habits improved over the decade. But both males and females reported substantially higher levels of difficulty with study habits in 1980 than in 1972. In 1972, 65% of the males and 50% of the females noted that poor study habits had interfered with their education; in 1980 the respective proportions were 76% and 66%. Although males reported more difficulties than females in both years, the increase over the decade was considerably greater for females. Increased difficulties with studying may stem from a wide range of factors: less adequate instruction in study habits in the elementary and junior high grades, less homework assigned, less support for doing homework from teachers and parents, reduced ability to do homework, and reduced availability of a specific place to study at home. With respect to this last item, the data show a decline over the decade from 59% to 49% of students having a specific place to study.

The data presented above clearly reflect grade inflation. One of the dangers

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during a period of grade inflation is that students may develop inaccurate assessments of their abilities. Too high grades may engender a false sense of academic security. In fact, the proportion of seniors stating that they definitely have the ability to complete college rose from 42% in 1972 to 48% in 1980.

Table 1. Choice of Occupation Factors, by Year and Sex*

% Rating Factor Very Important	1972 Males %*	1972 Females %*	1972 Total %*	1980 Males %*	1980 Females %*	1980 Total %*
Prior experience	19.3	19.3	19.3	29.6	31.7	30.7
Good income	35.8	26.5	31.1	48.3	43.4	45.7
Job security	43.4	37.9	40.6	57.8	58.1	58.0
Important work	75.5	82.8	79.2	81.4	89.4	85.6
Freedom to make decisions	46.4	40.0	43.2	60.6	63.0	61.8
Meet/work with friendly people	47.2	67.5	57.4	58.4	72.6	65.9

*Percentages reported for "very important" category only.

Future Expectations

Seniors' expectations for the future are typically focused on education and employment. In terms of the former, students look forward to higher levels of education in 1980 than they did in 1972. The proportion of seniors anticipating some postgraduate education rose from 13% in 1972 to 21% in 1980. The substantial difference that was evident in 1972 between men and women anticipating graduate study (17% and 9% respectively) disappeared by 1980. Thus the increase in the proportion of women anticipating graduate study was considerably greater than that for men.

The proportion of seniors not expecting to graduate from high school dropped from 2% to nearly zero. However, these figures do not reflect the actual incidence of dropping out, since all of those surveyed were already seniors. The proportion of seniors planning some type of vocational, technical, or business education as their highest level of academic attainment remained constant at about 18%, but the proportion planning on two- or four-year college declined from 51% to 41%. This decline is largely made up by the increase among those anticipating postgraduate education.

Several shifts occurred in the selection of a college major among those planning to attend college. Among the majors that more high school seniors preferred in 1980 than in 1972 were: business (13% to 22%), engineering (5% to 9%), and computer and information sciences (2% to 4%). Majors exhibiting the greatest decrease in student selection included social sciences (17% to 7%) and education (12% to 6%). A number of other majors selected by fewer than 5% of students in 1972 did even less well in 1980: English, ethnic studies, foreign languages, interdisciplinary studies, mathematics, music, philosophy or religion, and physical science. Seniors' choices are clearly moving from education, social sciences, and several liberal arts categories to business and the technical fields of engineering and computer sciences. Undoubtedly, part of the shift can be attributed to greater job opportunities in these technical fields. The data also show that women are increasingly selecting majors formerly dominated by males, especially business, communications, engineering, and mathematics.

The most striking feature of the job expectations of high school seniors is the similarity between the occupational choices in the two years. Nearly half the students in both years plan a professional career (46% in 1972 and 44% in 1980). The second most frequently selected occupational category is clerical, although fewer students selected this category in 1980 (10%) than in 1972 (14%). Although still relatively small, the proportion of students selecting the manager/administrator category has more than doubled (3% to 7%), as has the proportion selecting the proprietor/owner category (less than 2% to 4%). Most of the remaining occupational categories were each selected by fewer than 5% of the seniors in both years, and none of the differences between the two years exceeded 1%. The categories that increased most were business-related — a finding that parallels the increased selection of business as a college major.

All categories except sales were selected predominantly by one sex, and this pattern is found in both years. However, some of the disparity between males and females has been reduced. The largest change has occurred in the proportion of females selecting the clerical category (25% in 1972 and 17% in 1980). In short, the pattern of sex differences in occupational selection is similar in both years, but fewer women are selecting clerical occupations and more are choosing professional and business occupations.

For the year immediately following high school, women increasingly select attendance at an academic college, and men increasingly select full-time work. The proportion of males planning to attend an academic college declined slightly between 1972 and 1980 (from 46% to 44%), while the number planning to work full time increased from 25% to 32%. Women who were planning to attend an academic college increased from 44% to 49%, while the number who planned to work full time remained constant at 27%. In short, the predominant choice for the immediate future continues to be attendance at an academic college; working full time remains a distant second choice.

Values

Several significant shifts in the values held by seniors occurred during the Seventies. Six factors affecting seniors' occupational expectations for themselves at age 30 were examined (see Table 1). In both years the rank ordering of the six factors was as follows (highest to lowest): important and interesting work, meeting friendly people, freedom to make decisions, job security, good income, and previous work experience in the area. However, considerably greater proportions of seniors in 1980 rated *each* of these factors as "very important" than did their counterparts in 1972. This suggests that seniors today are more concerned about these basic factors than they were nearly 10 years ago. (Perhaps in 1972 other factors not included in this list, such as the social relevance of a particular occupation, were judged more important.) The greatest increases were found for freedom to make decisions, job security, and good income; undoubtedly the stagnating economy contributed to these changes.

In addition, several sex differences emerged. In both years females were much more likely than males to stress the importance of meeting and working with friendly people; they were somewhat more likely to stress the role of important and interesting work. Males were more likely in both years to stress the importance of good income, but women are narrowing the gap. While men were more likely to stress the importance of job security in 1972, no difference existed in 1980. And while men were more likely than women to emphasize autonomy in 1972, in 1980 the reverse was true.

Seniors were asked to rate several work-related values in terms of importance in their lives as a whole. Table 2, part A, displays these data. Being successful in their work was rated very important by more than 80% of seniors in both years. Having lots of money was seen as very important by only 18% of seniors in 1972 but by 31% in 1980. While the increase occurred for both men and women, more men continue to regard money as very important than do women. The proportion noting steady work as very important rose slightly. Both men and women attached more importance to income and job security in 1980 — a finding that may reflect their coming of age during a period of economic decline.

Parts B, C, and D of Table 2 display data for family, community, and other values in terms of the importance seniors attach to them. A happy family was rated very important by more than 80% of seniors in both years; the slightly higher proportion of women attaching importance to a happy family was constant from 1972 to 1980. Two-thirds of men and of women in both years rated better opportunities for their children very important. The proportion who rated living close to parents and relatives as very important nearly doubled (8% to 14%) between 1972 and 1980. Thus family values still constitute an important part of the lives of high school seniors.

Being a leader in the community was very important to only about 10% of the seniors in both years. Men were more likely to rate this value highly and women to rate happy family life highly, suggesting continued sex-role socialization. Seniors rated working to correct social and economic inequalities much less important in 1980 than in 1972 (27% to 13%); this decline was particularly pronounced among women. Strong friendships continued to be very important to about four-fifths of both men and women in both years. Moving to a new area was not very important in either year.

The values held by seniors have changed little between 1972 and 1980. Seniors continue to stress successful and steady work, a happy family life, and strong friendships. But seniors of the early 1980s are clearly less concerned with remedying social inequalities and more concerned with financial security than were their 1972 counterparts.

The Schools

Thus far we have seen how seniors feel about themselves, their achievements, and their futures. What of the changes in curriculum and instruction within the high schools themselves? What of changes in facilities and programs?

I found a high degree of similarity between 1972 and 1980 in both the frequency with which students mentioned certain instructional techniques and in the proportions of seniors noting frequent exposure to them. Lecturing is by far the most frequently used technique. More than 80% of both males and females in both years report often or frequent exposure to lectures. Writing and discussion are the next most commonly employed techniques. A clear majority of students in both years experienced both discussion and writing (59% and 64% respectively). In both years, women noted more frequent exposure to discussion and writing than did men (about six percentage points difference for each year). Women may be more likely to take English and other courses in which discussion and writing frequently occur, while men may be more likely to take mathematics and science courses, where discussion and writing occur less frequently.

Somewhat less than half the seniors frequently worked on projects or in a laboratory — a figure that declined slightly between 1972 and 1980 (from 49% to 44%). About a fourth of the seniors noted frequent use of individualized instruction in both years, with the proportion of women slightly higher than men. While computers and teaching machines were more frequently used in 1980, the increase is not as substantial (from 12% to 16%) as might have been predicted.

Table 2. 'Very Important' Life Values, by Year and Sex*

	1972			1980		
	Males %	Females %	Total %	Males %	Females %	Total %
A. Work						
1. Being successful in work	86.1	82.7	84.4	89.1	87.8	88.4
2. Having lots of money	25.9	9.7	17.8	40.5	23.1	31.4
3. Finding steady work	81.9	73.2	77.6	85.8	83.0	84.3
B. Family						
1. Happy family life	78.5	84.9	81.7	78.0	83.4	81.0
2. Giving kids better opportunities	66.5	66.4	66.5	67.3	66.5	66.9
3. Living close to parents/relatives	7.1	8.3	7.7	13.0	14.8	14.0
C. Community/Society						
1. Being leader in community	14.7	8.1	11.3	12.3	7.4	9.7
2. Helping correct inequalities	22.4	31.3	26.9	12.3	13.6	13.0
D. Other						
1. Having strong friendships	80.5	78.3	79.4	81.2	81.8	81.5
2. Moving away from area	14.5	14.6	14.6	14.7	14.0	14.3

*Percentages reported for "very important" category only.

In short, instructional techniques do not seem to be changing very dramatically in response to societal events. The proliferation of computers in society might be expected to have filtered down to the high schools. I would also have expected increased emphasis on writing, given the prominence of the back-to-basics movement and college instructors' complaints about poor writing. But the reports of the students in the 1980 survey differ only slightly from those of their counterparts nearly a decade earlier.

Table 3 reports the ratings given by seniors to various aspects of their high schools. Students were asked if they felt that their high school should have placed more emphasis on academic subjects. While half agreed in 1972, nearly three-fourths agreed in 1980. This finding is particularly interesting when compared with the previously noted decline in test scores, decline in the amount of homework done, and modest increase in study habit problems. Table 3 also shows that nearly half the seniors reported that the difficulty of some courses has interfered with their education. Thus seniors in 1980 seem to be responding to factors other than grades (which have improved) in their desire for more emphasis on academic subjects.

Perhaps seniors hold teachers partly responsible for their difficulties. The percentage of students rating the quality of academic instruction as good or excellent is fairly high, but it has declined slightly since 1972 (67% to 64%). In addition, the proportion of seniors noting that poor teaching has interfered with their education has risen from 50% to 60%, despite the fact that the rating given teacher interest in students has increased slightly. Seniors in 1980 apparently have mixed reactions to teachers and their teaching. On the one hand, more students in 1980 sense teacher interest; on the other hand, more of these same students say they have been hindered to a degree by poor teaching.

Nearly three-fourths of seniors in both years felt that their high schools should have placed more emphasis on vocational and technical programs, and about two-thirds noted that their schools did not offer enough practical work experience. Whereas their concern with academics is relatively recent, students have felt the desire for more emphasis on vocational and technical programs throughout the decade. Taken together, these desires pose a difficult problem for curriculum planners. It will be interesting to see how they respond to the large proportion of students desiring increased emphasis on *both* academic courses and vocational/technical courses.

Nevertheless, high school personnel *do* seem to be giving more attention to the vocational needs of their students. Whereas 38% of the seniors in 1972 noted that their high schools provided them with employment counseling, by 1980 that figure had risen to 49%. This increase may be due in part to greater federal funding for vocational education activities. However, many students continue to see the counselor's role as primarily focused on postsecondary education. Nearly two-thirds in each year agreed that their high schools provided them with this type of counseling.

Students were also asked to rate their high school's facilities and its reputation in the community. The proportion of students who rated the condition of buildings and classrooms as good or excellent fell slightly, while the proportion giving a good or excellent rating to the library facilities rose slightly. Ratings given to the reputation of the school in the community also showed a small decline. The reported decline in the condition of buildings may stem from reduced budgets for maintenance and new construction. The decline in reputation may be associated with increased public concern for discipline and declining achievement.

Only one item surveys the effects of bureaucratization on the high school experiences of seniors: The percentage noting serious difficulty adjusting to school routine rose from 24% in 1972 to 30% in 1980. In both years males were more likely to report such problems.

Major Trends

At least three major trends emerge from the comparison of the experiences and attitudes of high school seniors in 1972 with those of seniors in 1980.

The first of these trends is that seniors at the end of the decade show an increased emphasis on the importance of academics. This is especially interesting in light of the fact that at the end of the decade they are experiencing more study-habit problems and doing less homework. Nevertheless, the greatest change among all the variables I examined was the increase in the proportion of seniors indicating that their high school should have placed more emphasis on academics. Seniors also increasingly reported that poor teaching had interfered with their education. Perhaps the heightened attention of the media and such developments as minimum competency testing have combined to sensitize today's students to the widespread societal concern for falling academic achievement.

Table 3. Characteristics of High School, by Year and Sex

	1972			1980		
Agreeing*	**Males %**	**Females %**	**Total %**	**Males %**	**Females %**	**Total %**
1. School should have placed more emphasis on academics.	49.4	50.6	50.1	70.6	72.7	71.7
2. School should have placed more emphasis on vocations.	69.7	72.3	71.1	76.0	74.5	75.2
3. School did not offer enough practical work experience.	69.4	65.3	67.4	65.8	62.5	64.1
4. School provided counseling to help continue education.	62.6	62.7	62.7	66.9	64.9	65.8
5. School provided counseling to help find employment.	35.0	40.0	37.6	50.2	48.3	49.2
Rating as Good or Excellent**						
1. Condition of buildings and classrooms	70.4	68.1	69.2	65.6	61.9	63.7
2. Library facilities	65.0	62.9	64.0	68.5	67.4	67.9
3. Quality of academic instruction	66.1	67.6	66.8	65.8	63.1	64.4
4. Reputation in community	74.6	75.7	75.1	69.3	68.6	68.9
5. Teacher interest in students	51.1	52.3	51.7	56.6	54.1	55.3
Noting That the Following Interfered With Their Education						
1. Courses too hard	43.3	41.0	42.1	49.0	49.2	49.1
2. School routine	28.3	20.0	24.1	34.4	25.6	29.8
3. Poor teaching	50.1	50.5	50.3	59.7	60.8	60.3

*Those to whom the question did not apply were deleted from the base.

**Those responding "don't know" were deleted from the base.

The second major trend is reflected in the realm of student values. Seniors today show a heightened awareness of economic problems, which is reflected in the increased importance they attach to high income and job security. Although the grim realities of the job market have caused seniors today to attach more importance to all work-related values and less importance to correcting social inequities than did seniors in 1972, a striking consistency also characterizes the things they value. Seniors today continue to stress the importance of success at work, of a happy family life, and of strong friendships. They value these goals even more highly than they do job security and high income.

The growth of the women's movement has been a major development during the past decade, and its influence accounts for the third major trend in the data: The expectations for education and employment of men and women are more similar in 1980 than they were in 1972. Although many significant sex differences still exist, the data reflect a lessening of the effects of traditional sex-role socialization. For example, the discrepancies between the sexes in time spent on homework and study-habit difficulties have diminished. The plans for postgraduate education of men and women are now virtually identical, and females are now more likely than males to plan to attend college. In addition, the percentage of females selecting clerical occupations is smaller in 1980 than in 1972. Across the board the expectations and aspirations of young men and women are becoming more alike. Similar reductions in sex differences have occurred in such life values as the importance of money, of steady work, and of correcting social inequalities. All of these developments took place during a time of growing acceptance of the women's movement and may plausibly reflect the impact of this significant social change.

These three trends in the data show evidence of both consistency and change in the attitudes of seniors during the Seventies. Moreover, the reciprocal relationship between society and education emerges most clearly where attitudes have changed most significantly: in lessening of sex-related differences, in increased stress on work-related values, and especially in the renewed emphasis on academics.

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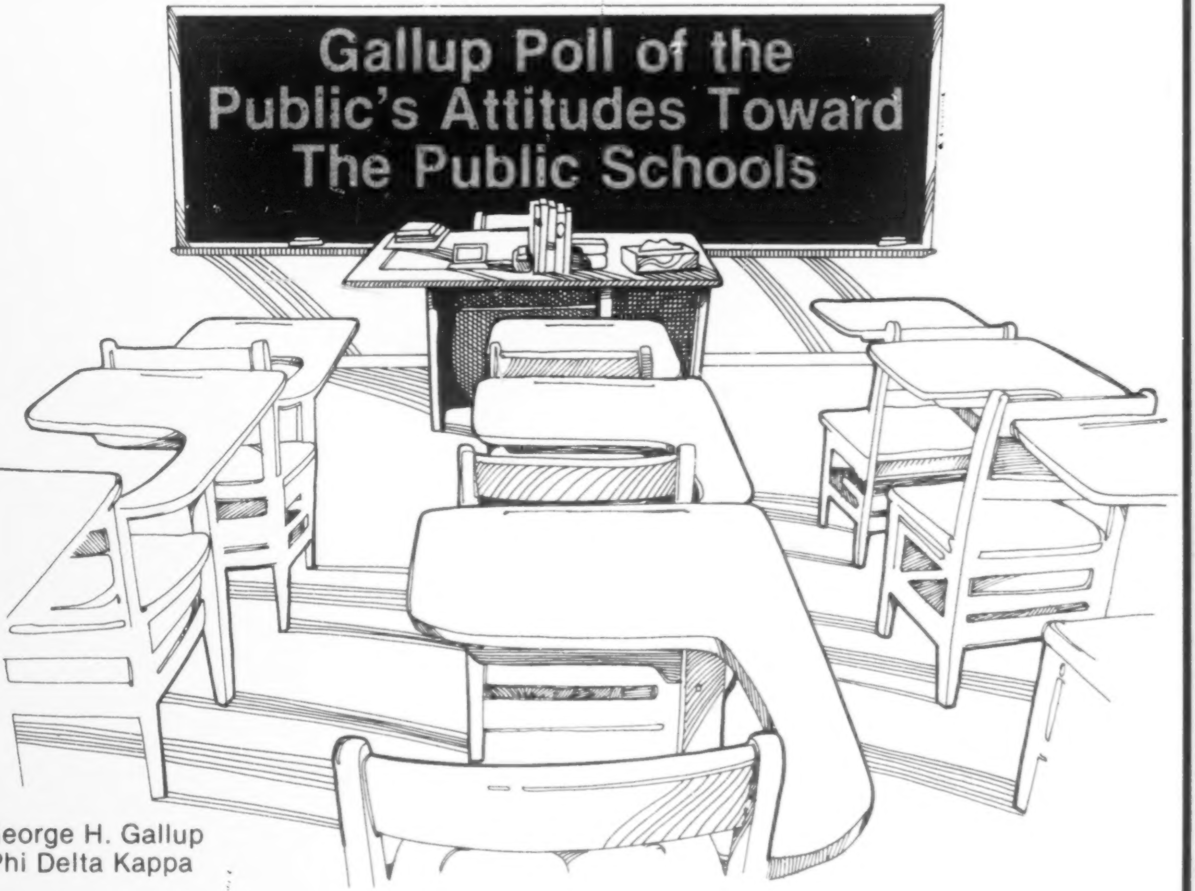
1. Jay Levinsohn et al., *National Longitudinal Study Base-Year, First, Second, and Third Follow-up Data File Users Manual* (Washington, D.C.: National Center for Education Statistics, 1978).

2. *High School and Beyond: Information for Users* (Chicago: National Opinion Research Center, 1980). □

The 13th Annual

Gallup Poll of the Public's Attitudes Toward The Public Schools



by George H. Gallup
for Phi Delta Kappa

Since 1970 the Kappan *has had the privilege of initial full publication of the annual Gallup Poll of the Public's Attitudes Toward the Public Schools. Until this year other groups sponsored and financed the polls. This 13th poll was sponsored by Phi Delta Kappa and financed by the Lilly Endowment of Indianapolis.*

As before, the Gallup education poll is a source of reliable information concerning trends in opinion about significant school questions. For school officials, the polls are valuable in at least two important ways: They alert decision makers to overall public reaction to a variety of school programs and policies, and they serve as a national benchmark against which local attitudes may be measured.

If local officials wish to employ questions asked in the Gallup education surveys, they are welcome to do so. The questions are not copyrighted. Moreover, no limits are placed upon the use of information contained in this report, beyond customary credit to source and observance of the canons of accuracy and completeness of quotation.

Last year Phi Delta Kappa's Dissemination Division, assisted by the Gallup Organization, prepared a package of materials to help school districts and other agencies survey local populations. For details of this service, called PACE (Polling Attitudes of the Community on Education), write or telephone Wilmer Bugher, associate executive secretary for administration, Phi Delta Kappa, P.O. Box 789, Bloomington, IN 47402. The phone number is 812/339-1156.

In preparing for this year's poll, Phi Delta Kappa obtained suggestions from nearly 100 educators and education writers. We wish to thank them for their splendid cooperation. We are also especially grateful to 14 prominent educators and interested laypersons who served on a panel of poll advisors. They are Grace Baisinger, former president, National PTA; Edward Brainard, former director, Colorado State Committee, North Central Association, now assistant superintendent, Aurora (Colorado) Public Schools; William G. Carr, retired former executive director, National Education Association; H. Dean Evans, senior program officer and director of elementary/secondary programs, Lilly Endowment; Richard Gray, chairman, Department of Journalism, Indiana University; Brenda H. Heffner, principal, Smyser Elementary School, Chicago; Carl Marburger, senior associate, National Committee for Citizens in Education; William K. Poston, superintendent, Flowing Wells Schools, Tucson, Arizona, and president, Phi Delta Kappa; Albert Quie, governor, state of Minnesota; Lowell Rose, executive secretary, Phi Delta Kappa; Marilyn Schultz, member, General Assembly, state of Indiana; David Seeley, consultant and writer, formerly director of the Public Education Association, New York City; and Ralph Tyler, director emeritus, Center for Advanced Study in the Behavioral Sciences, and senior consultant, Science Research Associates. — Stanley Elam, coordinator, Gallup Education Poll

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Purpose of the Study

This survey, which measures the attitudes of Americans toward their public schools, is the 13th annual survey in this series. Funding for this survey was provided by Phi Delta Kappa, Inc. A strong effort is made each year to deal with issues of greatest concern to both educators and to the public. New as well as trend questions are included in this and every survey.

To be sure that the survey would embrace the most important issues in the field of education, Phi Delta Kappa organized a meeting of various leaders in the field of education to discuss their ideas, evaluate proposed questions, and suggest new questions for the survey.

We wish to thank all persons who contributed their ideas to this survey.

Research Procedure

The Sample. The sample used in this survey embraced a total of 1,519 adults (18 years of age and older). It is described as a modified probability sample of the nation. Personal, in-home interviewing was conducted in all areas of the U.S. and in all types of communities. A description of the sample can be found at the end of this report.

Time of Interviewing. The fieldwork for this study was carried out during the period of 8-17 May 1981.

The Report. In the tables that follow, the heading "Nonpublic School Parents" includes parents of students who attend parochial schools and parents of students who attend private or independent schools.

Due allowance must be made for statistical variation, especially in the case of findings for small groups where relatively few respondents were interviewed, e.g., nonpublic school parents.

The findings of this report apply only to the U.S. as a whole and not to individual local communities. Local surveys, using the same questions, can be conducted to determine how local areas compare with the national norm.

Major Problems Confronting the Public Schools in 1981

Although discipline continues, as it has for many years, to be regarded as the number one problem facing the local public schools, a slight decline has been registered since last year. But this decline does not show up with parents of children now attending the public schools, and it is this group whose opinions are likely to be the best informed.

The order of the problems mentioned remains virtually the same as last year. Use of drugs received the second highest number of mentions; poor curriculum/low standards is in third place.

The question dealing with the most important problems as the public sees them is "open," which permits respondents to give their views without benefit of a list. This procedure offers the opportunity to discover new problems as they arise. Entering the list for the first time this year, and mentioned often enough to put it in the top half of the list, is "lack of respect for other students and for teachers."

Here is the question:

What do you think are the biggest problems with which the *public* schools in this community must deal?

	National Totals %	No Children In Schools %	Public School Parents %	Nonpublic School Parents %
Lack of discipline	23	21	26	29
Use of drugs	15	16	13	15
Poor curriculum/poor standards	14	13	14	12
Lack of proper financial support	12	10	16	11
Difficulty of getting good teachers	11	9	14	9
Integration/busing (combined)	11	12	9	18
Large schools/overcrowding	5	3	7	14

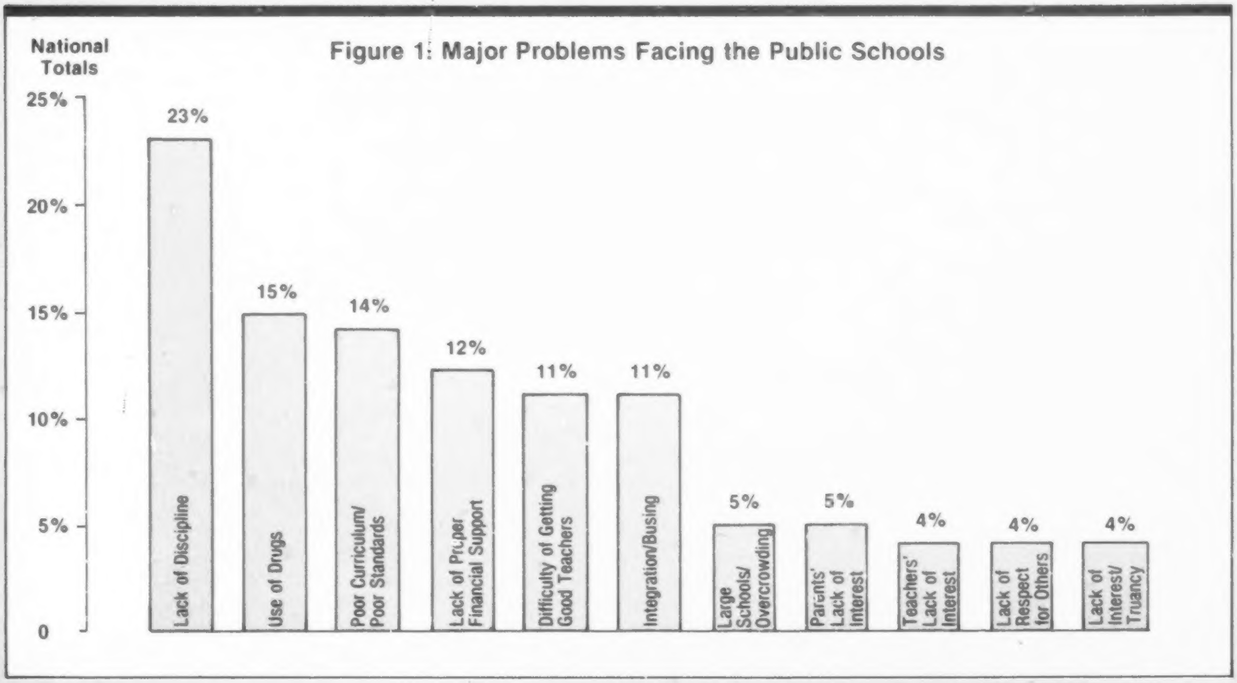
Figure 1: Major Problems Facing the Public Schools

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	National Totals %	No Children In Schools %	Public School Parents %	Nonpublic School Parents %
Parents' lack of interest	5	6	4	4
Teachers' lack of interest	4	4	5	5
Lack of respect for other students/teachers	4	4	6	4
Pupils' lack of interest/truancy	4	5	2	3
Crime/vandalism	3	3	2	1
Mismanagement of funds	3	2	3	6
Problems with administration	3	3	3	3
Drinking/alcoholism	2	2	1	2
Lack of proper facilities	2	2	2	3
Non-English-speaking students	1	1	1	2
Communication problems	1	1	2	1
Too many schools/declining enrollment	1	1	2	1
Moral standards	1	1	2	1
Teachers' strikes	1	1	1	1
School board policies	1	1	1	1
Government interference	1	1	2	2
Parents' involvement in school activities	1	*	*	1
Transportation	*	1	*	—
There are no problems	3	1	6	1
Miscellaneous	5	5	6	3
Don't know/no answer	12	16	5	9

(Figures add to more than 100% because of multiple answers.)

*Less than one-half of 1%.

1981 Ratings of the Public Schools

The 1981 survey provides further evidence that the decline in the ratings given by the public to the public schools in their communities has apparently come to a halt. Only slight changes have been recorded since 1976. On the other hand, evidence of an upturn in the ratings is still lacking.

The question:

Students are often given the grades A, B, C, D, and FAIL to denote the quality of their work. Suppose the *public* schools themselves, in this community, were graded in the same way. What grade would you give the public schools here — A, B, C, D, or FAIL?

Ratings Given The Public Schools	National Totals 1981 %	1980 %	1979 %	1978 %	1977 %	1976 %	1975 %	1974 %
A rating	9	10	8	9	11	13	13	18
B rating	27	25	26	27	26	29	30	30
C rating	34	29	30	30	28	28	28	21
D rating	13	12	11	11	11	10	9	6
FAIL	7	6	7	8	5	6	7	5
Don't know	10	18	18	15	19	14	13	20

Examination of the ratings given by different groups in the population reveals that younger citizens — the more recent graduates — are significantly more critical of the public schools than are their elders.

Residents of cities with fewer than 50,000 inhabitants have a much higher opinion of their public schools than persons living in cities with populations of more than 1 million.

In the present survey, as well as in earlier ones, persons living in the West rate their schools lower than persons who live in other sections of the nation. Southerners give their schools the highest grades.

Further breakdowns follow:

	A %	B %	C %	D %	FAIL %	Don't Know %
NATIONAL TOTALS	9	27	34	13	7	10
Sex						
Men	7	28	35	13	7	10
Women	10	25	33	13	8	11
Race						
White	9	27	33	13	8	10
Nonwhite	9	24	39	13	7	8
Age						
18 to 29 years	4	24	42	15	8	7
30 to 49 years	9	30	32	14	7	8
50 and over	12	25	30	11	7	15
Community Size						
1 million & over	5	25	33	17	9	11
500,000 - 999,999	11	28	29	13	11	8
50,000 - 499,999	6	22	38	16	7	11
2,500 - 49,999	15	28	31	9	7	10
Under 2,500	9	30	35	10	5	11
Central cities	5	20	38	15	12	10
Education						
Grade school	11	26	26	10	10	17
High school	7	26	36	13	8	10
College	10	28	34	15	5	8
Region						
East	7	27	33	12	9	12
Midwest	10	30	33	13	6	8
South	11	26	32	12	5	14
West	5	23	38	16	10	8

Public school educators can take some comfort from the fact that parents with children now attending the public schools give these schools a substantially higher grade than do those individuals who have no children now in school or those parents who are sending their children to nonpublic schools, as the following table shows:

By Parents with:	Rating of the Public Schools A %	B %	C %	D %	FAIL %	Don't Know %
Children in public schools	11	35	34	10	6	4
Children in nonpublic schools	6	19	37	18	12	8
No children in school	8	23	34	13	8	14

Rating of Public Schools Nationally

These yearly surveys frequently give rise to the question of whether residents of a given community tend to rate *their own* schools higher or lower than they do the public schools *nationally*. To shed light on this point, this year's survey asked respondents to rate the public schools nationally as well as the schools of their own community.

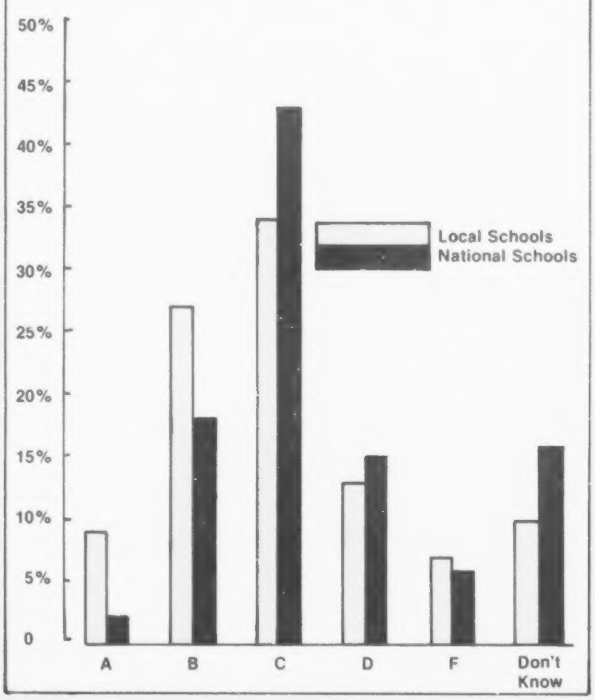
The results make the answer clear: The respondents tend to have a higher regard for their own schools than for the public schools of the nation. Whereas 36% give their own schools a rating of A or B, only 20% give the public schools of the nation as high a rating.

The question:

How about the public schools in the nation as a whole? What grade would you give the public schools *nationally* — A, B, C, D, or FAIL?

	A %	B %	C %	D %	FAIL %	Don't Know %
Public schools in this community	9	27	34	13	7	10
Public schools in the nation	2	18	43	15	6	16

Figure 2. Public Rating of Schools Locally vs. Schools Nationally



How the Public Grades Teachers In Their Own Community

Using the same scale as that used to rate the schools, respondents were asked to rate the teachers in the local public schools. The teachers fare slightly better than the schools themselves, as the following results indicate.

The question:

Now, what grade would you give the teachers in the public schools in this community — A, B, C, D, or FAIL?

	Rating of Teachers %	Rating of Schools %
A rating	11	9
B rating	28	27
C rating	31	34
D rating	9	13
FAIL	6	7
Don't know	15	10

The ratings given teachers and the ratings given the schools are much alike. Highest teacher ratings go to those who teach in the Midwest and South, lowest to those in the East and West. Teachers in cities of more than 1 million are rated lower than those in the smallest towns. Parents with children now attending public schools rate their teachers appreciably higher than those who do not have children in school or than those whose children attend nonpublic schools.

Further breakdowns:

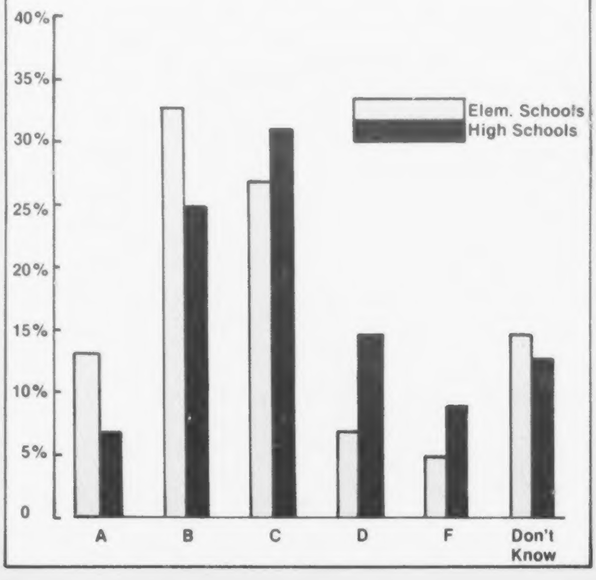
	Ratings of Public School Teachers					
	A %	B %	C %	D %	FAIL %	Don't Know %
National Totals	11	28	31	9	6	13
Sex						
Men	10	30	32	10	6	12
Women	12	28	30	8	6	16
Race						
White	10	28	32	9	6	15
Nonwhite	14	34	26	9	9	8
Age						
18 to 29 years	7	28	35	11	7	12
30 to 49 years	13	30	31	10	7	9
50 and older	12	26	27	8	6	21
Community Size						
1 million & over	6	30	34	9	10	11
500,000 - 999,999	12	31	24	10	9	14
50,000 - 499,999	11	22	33	10	6	18
2,500 - 49,999	19	27	27	7	4	16
Under 2,500	11	32	32	9	4	12
Central cities	9	24	33	9	9	16
Education						
Grade school	16	27	20	9	8	20
High school	10	27	32	10	7	14
College	10	32	33	8	4	13
Region						
East	8	27	31	11	8	15
Midwest	13	30	33	8	5	11
South	15	29	26	8	5	17
West	7	28	32	11	8	14

Rating of Local Public Elementary Schools Versus Local Public High Schools

Do adults in the U.S. rate public elementary schools higher or lower than they do their public high schools? This question has also arisen frequently during the 13 years that these annual surveys have been conducted. Obviously the problems are quite different, but it is still important to establish baselines for future comparisons.

The survey findings show that the public rates elementary schools higher than they do high schools.

Figure 3. Public Rating of Elementary Schools vs. High Schools



The questions:

Thinking again of the public schools in *this community* — what grade would you give the *elementary schools* here — A, B, C, D, or FAIL?

What grade would you give the public *high schools* here — A, B, C, D, or FAIL?

Rating of Elementary Schools Versus High Schools

	Public Elementary Schools %	Public High Schools %
A rating	13	7
B rating	33	25
C rating	27	31
D rating	7	15
FAIL	5	9
Don't know	15	13

Financial Support of the Public Schools

In the first survey in this series on how the public regards the public schools, a question was included that dealt with willingness to support the schools financially in the event that they needed more funds.

The question was worded as follows:

Suppose the local public schools said they needed much more money. As you feel at this time, would you vote to raise taxes for this purpose, or would you vote against raising taxes for this purpose?

This same question was asked in 1969, 1970, 1971, and 1972. It was repeated in the 1981 survey to measure the changes in the public's attitudes since 1972.

The results show roughly the same downward trend as the ratings given the public schools. More important, perhaps, has been the trend toward conservative fiscal policies evidenced in elections during recent years. The decline in the school population in many areas could also account in part for the lower percentage of approval on this question.

For those who are interested in school bond issues or increasing school budgets, the results are not so grim as they seem. The persons least likely to vote in elections or on bond issues are the most opposed to voting increases for the schools.

Financial Support of the Public Schools

NATIONAL RESULTS	Favor Raising Taxes %	Opposed to Raising Taxes %	Don't Know %
1981 survey	30	60	10
1972 survey	36	56	8
1971 survey	40	52	8
1970 survey	37	56	7
1969 survey	45	49	6

1981 survey	Favor %	Oppose %	Don't Know %
Parents of children attending public schools	36	58	6
Parents of children attending nonpublic schools	35	57	8
Adults with no children in school	27	60	13

When asked to give the reasons why they would vote for or against raising taxes to support the local schools, the chief reasons cited, in order of mention, by those who would vote *for* increases are as follows:

1. Education is so important today that any increases are warranted.
2. The schools do not have enough money to operate efficiently.
3. More money is needed to get better teachers.
4. Better/additional facilities are needed.

Those who *oppose* increases cite these reasons:

1. Much of the money now spent on the schools is wasted.
2. Taxes are already too high/can't afford more.
3. Teachers are not doing their job/shouldn't get increases.
4. The schools have a poor performance record.

The Public's Attitudes Toward Nonpublic Schools

The increasing number of nonpublic schools poses a threat to the public schools, in the opinion of many educators. They argue that the nonpublic schools will attract the better students chiefly from the better-educated and upper-income families and that the public schools will be left with most of the problem students.

Two questions were asked to gain insight into what people of the nation think about this issue. First, respondents were asked why they thought the number of nonpublic schools had increased in recent years. The second question asked how they themselves felt about this increase in nonpublic schools — did they think it was a good thing or a bad thing?

The first question:

In recent years the number of nonpublic schools, that is, private and church-related schools, has increased in many parts of the nation. Why do you think this has happened?

Answers to this "open" question elicited these responses, listed in order of mention:

1. Poor educational standards in the public schools. Education in nonpublic schools is superior.
2. Integration/forced busing/racial problems.
3. Greater discipline is found in nonpublic schools.
4. More attention is given to religion in nonpublic schools.
5. Too many drug and alcohol problems in the public schools.
6. Overcrowding in the public schools.

The second question asked:

In general, do you think this increase in nonpublic schools is a good thing or a bad thing for the nation?

	National Totals %	No Children In Schools %	Public School Parents %	Nonpublic School Parents %
Increase in nonpublic schools is a good thing	49	49	44	63
Is a bad thing	30	28	36	23
No opinion	21	23	20	14

The more complete breakdowns that follow show that in the South, the section of the nation that has probably had the greatest experience with nonpublic schools, opinion is almost evenly divided on whether the increase in the number of nonpublic schools is a good or a bad thing for the nation.

Further breakdowns:

	Attitudes Toward Increase in Nonpublic Schools		
	Good Thing %	Bad Thing %	No Opinion %
NATIONAL TOTALS	49	30	21
Sex			
Men	48	32	20
Women	49	28	23
Race			
White	49	30	21
Nonwhite	46	29	25
Age			
18 to 29 years	52	29	19
30 to 49 years	46	31	23
50 and older	48	30	22
Community Size			
1 million & over	48	27	25
500,000 - 999,999	49	29	22
50,000 - 499,999	53	30	17
2,500 - 49,999	50	30	20
Under 2,500	44	32	24
Central cities	51	28	21
Education			
Grade school	46	27	27
High school	48	30	22
College	50	32	18
Region			
East	49	29	22
Midwest	56	21	23
South	38	39	23
West	52	30	18

Tax Support for Parochial Schools

The 1970 survey in this series included a question about helping parochial schools make ends meet with help from government tax money. By a small minority, a representative sample of the nation's adults voted at that time in favor of this proposal.

In the present survey, when the same question was asked, a majority *opposed* this government help from tax funds.

As reported earlier, the public opposes raising more tax money for the local public schools, and this same fiscal conservatism undoubtedly influences attitudes about helping parochial schools with financial aid. In the 1974 survey in this series, the public actually favored an amendment to the U.S. Constitution that would permit government financial aid to parochial schools.

The question:

It has been proposed that some government tax money be used to help parochial (church-related) schools make ends meet. How do you feel about this? Do you favor or oppose giving some government tax money to help parochial schools?

1981 Survey	**National Totals %**	**No Children In Schools %**	**Public School Parents %**	**Nonpublic School Parents %**
Favor tax support	40	40	37	59
Oppose	51	50	56	35
No opinion	9	10	7	6

National Results for 1970 Compared with 1981

	1970 %	1981 %
Favor tax support	48	40
Oppose	44	51
No opinion	8	9

The Amount of Attention Given To Six Educational Objectives

The public expects a great deal from the public schools, and the findings from a question concerning six objectives of education provide further proof of these high expectations.

Most studies dealing with the goals of education reveal that the public expects the public schools to assume responsibilities that in the past have been borne by the home and the church. For example, in the present survey the objective that receives the highest vote from respondents is "developing students' moral and ethical character."

The concern for "teaching students to think," shown in the results, may spur present efforts to find procedures that improve thinking ability. One nation, Venezuela, has appointed a minister of cabinet rank to help improve the thinking abilities of students in that country. And both Great Britain and the United States are mounting promising efforts to improve the problem-solving abilities of students.

The question:

I am going to read off some of the areas to which the public high schools devote attention in educating students.

As I read off these areas, one at a time, would you tell me whether you feel the high schools in your community devote too much attention, not enough attention, or about the right amount of attention to that area.

The results, listed in order of those saying "not enough" attention:

	Too Much %	Not Enough %	Right Amount %	Don't Know %
1. Developing students' moral and ethical character	2	62	21	15
2. Teaching students how to think	2	59	25	14
3. Preparing students who do not go to college for a job or career after graduation	2	56	29	13
4. Preparing students to become informed citizens prepared to vote at 18	2	55	28	15
5. Preparing students for college	3	43	39	15
6. Developing students' appreciation of art, music, and other cultural interests	7	37	41	15

The views of three different groups in the population have special significance in considering the objectives of education: parents with children now attending the public schools; the age group (18 to 29) who have had the most recent school experience; and those who have pursued their education to the college level.

Substantial agreement is found among these three groups and the general public as to the objectives that need greater attention in the high schools of the nation.

The results:

Objectives That Receive "Not Enough" Attention in High School

	National Totals %	Public School Parents %	18-29 Age Group %	College Educated %
1. Developing students' moral and ethical character	62	66	63	64
2. Teaching students to think	59	58	58	62
3. Preparing students who do not go to college for a job or career after graduation	56	56	56	56
4. Preparing students to become informed citizens ready to vote at 18	55	54	58	61
5. Preparing students for college	43	46	46	43
6. Developing students' appreciation of art, music, and other cultural interests	37	37	43	43

Instruction in Values

Americans would favor instruction in values and ethical behavior as part of the public school curriculum by a ratio of about four to one, 70% to 17%. Parents with public school children are slightly more likely to support such a proposal than are nonparents.

Here is the question asked and the findings:

Would you favor or oppose instruction in the schools that would deal with values and ethical behavior?

	National Totals %	No Children In Schools %	Public School Parents %	Nonpublic School Parents %
Favor	70	67	73	79
Oppose	17	18	15	16
No opinion	13	15	12	5

Analysis of the survey findings by socioeconomic groups indicates that strong majority support for instruction in values and ethical behavior exists in all population segments. It is especially high in the South (73%) and in small-town America, communities with fewer than 2,500 inhabitants (74%).

In contrast, the lowest level of support for values instruction (58%) occurs in the nation's largest metropolitan areas, i.e., cities with populations of more than 1 million.

Should Sex Education Be Included In the Public School Instructional Program?

Sex education in the public schools has long been a subject of controversy — especially the issue of whether such a program should begin in the elementary grades. Still another matter of debate has been the content of these programs — the topics that should be discussed.

In the 1970 survey respondents were asked whether they approved or disapproved of "schools giving courses in sex education." It was not specified at that time whether the courses were to be given both in high school and in elementary school. The present study includes separate questions for high school and elementary school.

Results of the 1970 survey showed 65% of the respondents approving of sex education in the schools, 28% disapproving, and 7% with no opinion.

In the present survey 70% said they thought sex education should be included in the instructional program of high schools, 22% said sex education should not be, and 8% had no opinion.

The question dealing with sex education in the elementary schools specified that instruction would be given in grades 4 through 8. The public is fairly evenly divided on the issue of sex education in the elementary schools: Forty-five percent say it should be included, 48% say it should not, and 7% have no opinion.

The question about sex education in high schools follows:

Do you feel the public high schools should or should not include sex education in their instructional program?

The results:

Sex Education In High Schools

	National Totals %	No Children In Schools %	Public School Parents %	Nonpublic School Parents %
Should	70	66	79	79
Should not	22	25	16	17
No opinion	8	9	5	4

The question dealing with sex education in elementary schools was stated as follows:

Do you feel the public elementary schools should or should not include sex education in grades 4 through 8?

The results:

Sex Education in Elementary Schools

	National Totals %	No Children In Schools %	Public School Parents %	Nonpublic School Parents %
Should	45	41	52	61
Should not	48	50	43	32
No opinion	7	9	5	7

Further analysis of the findings by groups reveals that parents with children now attending public or nonpublic schools vote overwhelmingly for sex education for students in high school. They also favor sex instruction in elementary schools (grades 4 through 8), but by a smaller margin.

The younger age groups favor sex education both in elementary and in high schools. The older age groups hold the opposite view.

Respondents who have attended college strongly approve of sex education in the schools. The grade school educated strongly disapprove.

Persons living in the West favor sex education in the schools much more strongly than do persons living in the South.

Catholics approve of sex education in high schools and, by a slight margin, in the elementary schools. In fact, Catholics approve of sex education in both high schools and elementary schools to a slightly greater extent than do Protestants.

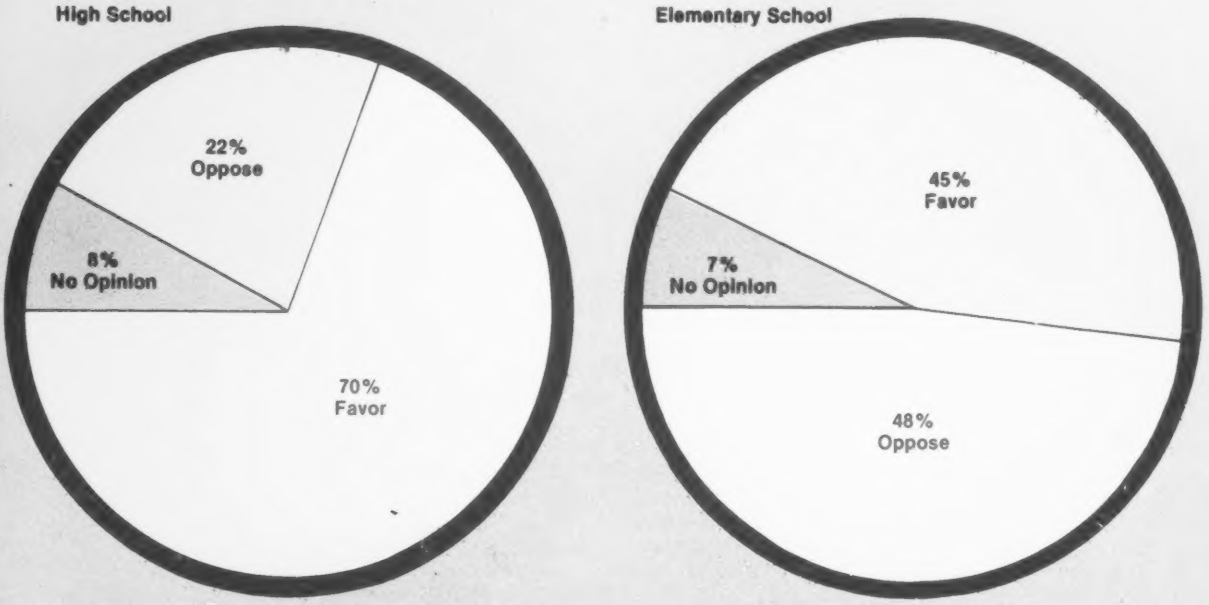
Further breakdowns:

	Offer Sex Education In High Schools		
	Should %	Should Not %	Don't Know %
NATIONAL TOTALS	70	22	8
Sex			
Men	71	23	6
Women	70	22	8
Race			
White	71	22	7
Nonwhite	68	22	10
Age			
18 to 29 years	86	10	4
30 to 49 years	77	18	5
50 and older	53	35	12
Community Size			
1 million & over	72	17	11
500,000 - 999,999	78	14	8
50,000 - 499,999	74	22	4
2,500 - 49,999	64	28	8
Under 2,500	66	27	7
Central cities	71	20	9
Education			
Grade school	42	47	11
High school	71	20	9
College	83	14	3
Region			
East	74	18	8
Midwest	71	19	10
South	64	28	8
West	74	23	3
Religion			
Protestant	69	24	7
Catholic	72	21	7

Further breakdowns:

	Offer Sex Education In Elementary Schools (Grades 4 Through 8)		
	Should %	Should Not %	Don't Know %
NATIONAL TOTALS	45	48	7
Sex			
Men	40	53	7
Women	49	43	8
Race			
White	46	47	7
Nonwhite	40	48	12
Age			
18 to 29 years	53	42	5
30 to 49 years	52	41	7
50 and older	32	58	10
Community Size			
1 million & over	48	41	11
500,000 - 999,999	59	35	6
50,000 - 499,999	48	47	5
2,500 - 49,999	42	50	8
Under 2,500	35	58	7
Central cities	45	46	9
Education			
Grade school	23	66	11
High school	43	48	9
College	59	37	4
Region			
East	49	45	7
Midwest	45	46	9
South	38	54	8
West	51	44	5
Religion			
Protestant	44	50	6
Catholic	46	46	8

Figure 4. Should Sex Education Be Offered in the Public Schools?



Topics to Be Included in Sex Education Instruction

Interviewers asked those persons who favored sex education in the high schools to choose the topics which they thought should be included in an instructional program. Each respondent who approved of this instruction was handed a card that listed seven subjects. The same procedure was used in respect to sex education in the elementary schools.

The list of topics is not designed to be complete but is intended to shed light on the kinds of topics the public would like to have included in a program of sex education.

Topics That Should Be Included by All Those Who Favor Sex Education

	In High School Program %	In Elementary School Program %
1. Venereal disease	84	52
2. Birth control	79	45
3. The biology of reproduction	77	83
4. Premarital sex	60	40
5. Abortion	54	26
6. Nature of sexual intercourse	53	36
7. Homosexuality	45	23

Topics That Should Be Included by Parents Who Favor Sex Education

	In High School Program %	In Elementary School Program %
1. Venereal disease	85	46
2. Birth control	77	38
3. The biology of reproduction	78	85
4. Premarital sex	59	30
5. Abortion	52	20
6. Nature of sexual intercourse	48	35
7. Homosexuality	40	19

How Well Are the Public Schools Teaching Different Subjects?

This year's survey attempted to ascertain how parents with children now attending school regard the quality of instruction in different subject areas. Only parents with children now in school were questioned, since it was assumed that the general public is not well enough informed to pass judgment on the schools' performance in these subject areas.

The survey findings indicate that, in the absence of standardized test scores and other objective data, parents, too, find it difficult to rate the quality of instruction offered in different subject areas.

Overall attitudes toward the public schools apparently have an important influence on ratings, a fact revealed by the similarity in the ratings given different subject areas.

The most revealing ratings are those at the two extremes — the top ratings (A and B) compared with the lowest ratings (D and FAIL). These ratings are given by individuals who are most likely to be concerned and who, therefore, are most likely to transform their feelings into some type of action.

The question:

Using the A, B, C, D, and FAIL scale again, please grade the job you feel the public schools here are doing in providing education in each of the following areas.

The interviewer then read a list of nine subject areas, asking the respondents to rate each subject in turn.

	A or B Rating %	D or FAIL Rating %
Physical education	61	6
Music	49	11
Reading	48	16
Mathematics	47	14
Writing	46	18
Science	44	10
Art	42	11
Social studies	42	11
Vocational training	35	21

In addition to learning how parents with children now in school rate the quality of instruction in different subjects, it is useful to examine the ratings given by two subgroups in the parent population: 1) graduates of the school system in recent years — the 18 to 34 age group — and 2) individuals who have attended college. Obviously these are not mutually exclusive groups.

Parents' Rating of the Quality of Instruction

Reading	**All Parents** %	**18 - 34** %	**College** %	**Public School Parents** %
A	16	15	16	17
B	32	29	31	34
C	27	23	27	25
D	11	13	14	10
FAIL	5	5	5	5
Don't know	9	15	7	9

Writing	**All Parents** %	**18 - 34** %	**College** %	**Public School Parents** %
A	12	11	10	13
B	34	34	32	36
C	27	21	31	25
D	12	11	15	12
FAIL	6	8	5	5
Don't know	9	15	7	9

Mathematics	**All Parents** %	**18 - 34** %	**College** %	**Public School Parents** %
A	13	12	14	14
B	34	26	40	35
C	29	28	30	28
D	10	13	6	10
FAIL	4	5	3	3
Don't know	10	16	7	10

Science	**All Parents** %	**18 - 34** %	**College** %	**Public School Parents** %
A	11	9	9	12
B	33	26	40	34
C	33	30	31	32
D	7	12	8	7
FAIL	3	2	3	2
Don't know	13	21	9	13

Parents' Rating of the Quality Of Instruction (continued)

Social Studies	All Parents %	18 - 34 %	College %	Public School Parents %
A	11	9	12	11
B	32	25	31	34
C	32	32	37	31
D	8	10	5	8
FAIL	3	4	3	3
Don't know	14	20	12	13

Music	All Parents %	18 - 34 %	College %	Public School Parents %
A	17	13	15	18
B	32	31	31	32
C	22	21	27	21
D	9	12	10	8
FAIL	3	3	2	3
Don't know	17	20	15	18

Physical Education	All Parents %	18 - 34 %	College %	Public School Parents %
A	21	17	20	22
B	41	38	45	41
C	20	18	21	19
D	4	8	5	4
FAIL	2	3	1	2
Don't know	12	16	8	12

Art	All Parents %	18 - 34 %	College %	Public School Parents %
A	12	14	13	13
B	30	27	30	32
C	28	27	33	26
D	9	12	8	9
FAIL	2	2	2	2
Don't know	19	18	14	18

Vocational or Job Training	All Parents %	18 - 34 %	College %	Public School Parents %
A	8	6	7	8
B	27	21	26	28
C	25	21	29	24
D	15	16	15	15
FAIL	6	6	7	6
Don't know	19	30	16	19

The ratings (A or B) given by respondents in different regions of the nation also provide insight in regard to parents' opinions of the quality of instruction children are receiving in different subjects.

Parents Who Give an A or B Rating to Instruction in Different Subject Areas

	East %	Midwest %	South %	West %
Reading	50	47	49	45
Writing	46	46	52	37
Mathematics	51	44	51	41
Science	54	41	44	33
Social studies	52	39	44	33
Music	54	50	49	49
Physical education	65	62	64	52
Art	50	42	39	39
Vocational education	35	36	39	29

Teachers' Salaries

The weight of public opinion seems to be that teachers' salaries are too low. Although a plurality (41%) say that teachers' salaries are about right, 29% hold that they are too low, as compared to only 10% who say that they are too high.

Teachers' salaries have increased substantially since the question of how much teachers should be paid was first asked in this series. In 1969, 43% thought salaries were about right, 33% said they were too low, and 2% said they were too high.

Those who have been out of school or college the shortest time — those 18 to 29 years of age — are the ones most likely to feel that teachers are underpaid. In this age group 42% say that teachers' salaries are too low — a view that may help explain why so many, in recent years, have decided against entering the teaching profession.

Persons with a college education, and residents of the South, where salaries tend to be lower than in other regions of the nation, are most inclined to say that salaries are too low.

The question:

Do you think salaries in this community for teachers are too high, too low, or about right?

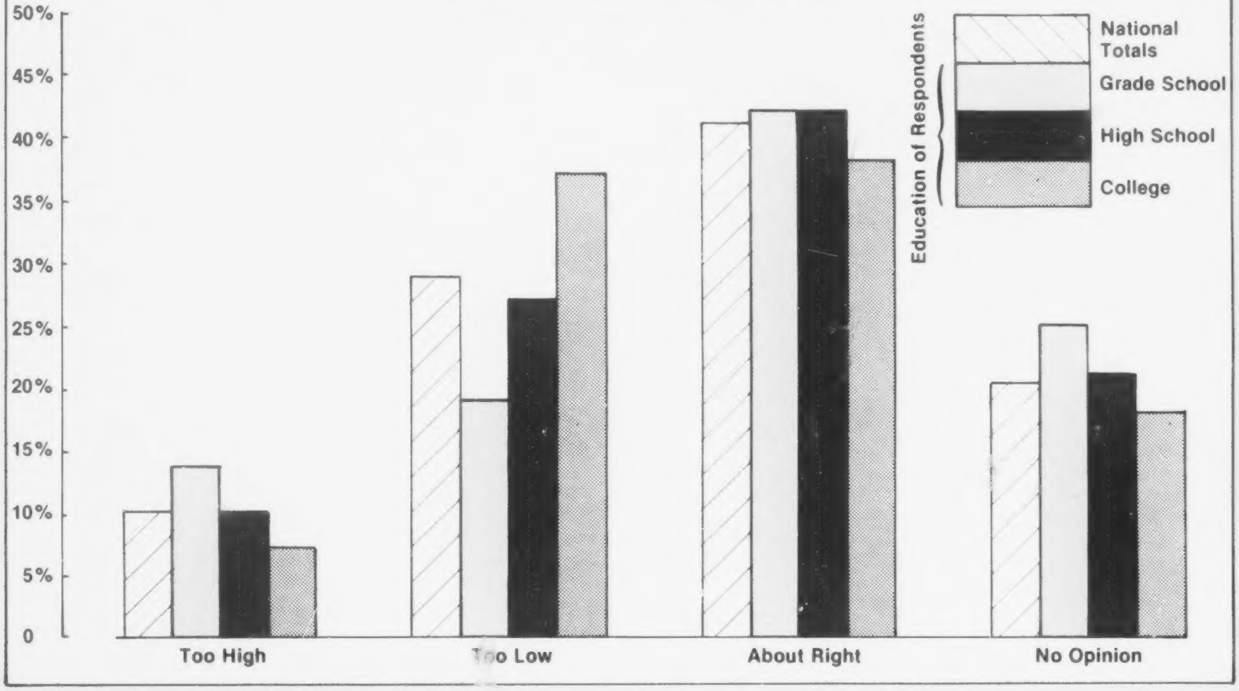
The findings:

	National Totals %	No Children In Schools %	Public School Parents %	Nonpublic School Parents %
Salaries too high	10	11	6	9
Salaries too low	29	28	31	39
About right	41	39	46	39
No opinion	20	22	17	13

Further breakdowns:

	Teachers' Salaries			
	Too High %	Too Low %	About Right %	No Opinion %
NATIONAL TOTALS	10	29	41	20
Sex				
Men	10	28	43	19
Women	9	30	40	21
Race				
White	10	28	42	20
Nonwhite	7	37	35	21
Age				
18 to 29 years	7	42	33	18
30 to 49 years	7	30	43	20
50 and over	14	18	45	23
Community Size				
1 million & over	8	22	47	23
500,000 - 999,999	5	42	32	21
50,000 - 499,999	10	30	42	18
2,500 - 49,999	10	26	39	25
Under 2,500	12	29	41	18
Central cities	10	30	40	20
Education				
Grade school	14	19	42	25
High school	10	27	42	21
College	7	37	38	18
Region				
East	12	23	42	23
Midwest	9	23	52	16
South	8	42	28	22
West	10	27	43	20

Figure 5. Are Teachers' Salaries Too High, Too Low, or About Right?



Seniority Rights for Teachers

Performance in teaching is hard to judge — yet this is the standard that the public believes should be followed instead of seniority, when teachers must be laid off to save money in a school system.

By an overwhelming majority, the public favors performance over seniority — a view consistent with the public's attitudes toward tenure.

Every major group in the population votes heavily against seniority — even those who are themselves over the age of 50.

The question:

If teachers must be laid off to save money in a school system, do you believe that those who are to be kept should be chosen on the basis of performance or on the basis of seniority?

Seniority Rights for Teachers

	National Totals %	No Children In Schools %	Public School Parents %	Nonpublic School Parents %
Teachers should be kept on basis of performance	78	77	80	89
Kept on basis of seniority	17	17	18	8
No opinion	5	6	2	3

Further breakdowns:

Seniority Rights for Teachers

	Kept on Basis of Performance %	Kept on Basis of Seniority %	No Opinion %
NATIONAL TOTALS	78	17	5
Sex			
Men	79	18	3
Women	78	16	6
Race			
White	81	15	4
Nonwhite	64	29	7
Age			
18 to 29 years	82	14	4
30 to 49 years	80	17	3
50 and older	74	19	7
Community Size			
1 million & over	82	13	5
500,000 - 999,999	78	16	6
50,000 - 499,999	77	18	5
2,500 - 49,999	76	21	3
Under 2,500	78	17	5
Central cities	74	21	5
Education			
Grade school	64	26	10
High school	80	16	4
College	82	15	3
Region			
East	84	11	5
Midwest	73	23	4
South	74	20	6
West	87	11	2

Parent/Teacher Conferences

Parents who have attended college and parents whose children are in the top half of their class are more likely to take advantage of conferences with their children's teachers than those of lesser education and parents whose children are in the lower half of their class.

In the current survey parents with children now attending school were asked if they had discussed their (eldest) child's progress or problems at any time since the beginning of the school year and the number of times they had held such meetings. Parents were also asked if they thought the teacher(s) in these conferences seemed to be interested in discussing their child's schoolwork or behavior.

Since parents and teachers are more likely to hold such meetings when children are in elementary school than when they are in high school, the results have been tabulated in two categories: children under 13 years of age and those 13 and older.

The question:

Thinking about your eldest child, have you at any time since the beginning of the school year discussed your child's progress or problems with any of your child's teachers?

Results in the present survey show that 83% of the parents whose eldest child is 12 years of age or younger had discussed the child's progress or behavior with the child's teachers. This compares with 79% who answered the same question in the 1977 survey. For children 13 years of age and older the figure obtained in the present study is 55% — exactly the same percentage found in 1977.

A second question asked:

About how often since the beginning of the school year have you had discussions with your (eldest) child's teachers?

The results:

Number of Parent/Teacher Conferences Since the Beginning of School Year	Children 12 Years And Under	Children 13 Years And Older
	%	%
One meeting	18	28
Two meetings	39	32
Three meetings	17	17
Four or five meetings	15	8
Six or more	10	14
Can't recall/no answer	1	1

A third question dealing with parent/teacher conferences sought to learn whether parents who took part in these meetings felt that the teachers were interested in discussing their children's progress and problems.

On this point there is wide agreement. Parents said they believed the teachers *were* interested and, in a sense, invited such meetings with parents.

The question:

Thinking about the last time you spoke with your (eldest) child's teacher or teachers, did you feel that they were interested in discussing your child's work or behavior with you?

Reaction to Parent/ Teacher Meetings	All Parents Having Meeting With Teacher(s)	Education of Parents		
		Grade School	High School	College
	%	%	%	%
Teachers were interested	80	69	80	85
Were not interested	7	12	6	9
Don't know	13	19	14	6

Help with Homework

Children in elementary school are helped much more often with their homework than are older children. In fact, six in 10 of the parents of children 13 years of age and older say that they do not help with the homework of their children in this older age group. By contrast, only two in 10 say that they do not help their younger children.

When comparisons are made with the 1977 survey, when this same question was asked of parents with children in school, a gain appears in the percentage of those who say they help their children (those 12 years of age and under) regularly with their homework.

	Children 12 Years And Under		Children 13 Years And Over	
	1981	1977	1981	1977
	%	%	%	%
Yes, help regularly with homework	49	37	14	16
No, only when needed	28	34	26	26
No, do not help	22	27	60	58
No answer	1	2	—	—

Time Limits on Television Viewing During School Week

Although there has been much discussion of the effects of television viewing on children now in school and the possible influence this viewing may have on their grades and test scores, no significant change has been found in the percentage of homes that place a definite limit on the amount of television viewing by school-age children.

A question included in the 1977 survey was repeated in the current survey. The question, asked of parents, follows:

Do you place a definite limit on the amount of time your eldest child spends viewing television during the school week?

The results of the present survey compared with the 1977 findings:

Limit on Television Viewing

	Parents Place Limit on TV Viewing	Parents Do *Not* Place Limit	Don't Know/ No Answer
	%	%	%
1977 survey	35	60	5
1981 survey	36	57	7

Parents are much more likely to place a limit on television viewing when their eldest child is 12 years of age or under.

	Parents Whose Eldest Child Is 12 Years And Under	Parents Whose Eldest Child Is 13 Years And Over
	%	%
Parents place a definite time limit on viewing	51	27
No, do not	48	72
Don't know/no answer	1	1

Although it is impossible to establish cause and effect, it is interesting to note that parents of children who are in the upper half of their class are more likely to impose limits on their children's television viewing than are parents of children in the lower half of their class.

	Impose Limits On TV Viewing %	Do Not Impose Limits %	Don't Know/ No Answer %
Parents of child in upper half of class	41	58	1
Parents of child in lower half of class	34	64	2

Should Child-Care Centers Be Made Part of the Public School System?

The nation is fairly evenly divided on the proposal to make child-care centers available for all preschool children as part of the public school system. No statistically significant change has been found on this issue since the 1976 survey, when this question was last asked.

The question:

> **A proposal has been made to make child-care centers available for all preschool children as part of the public school system. This program would be supported by taxes. Would you favor or oppose such a program in your school district?**

	Child-Care Centers as Part of The Public School System		
	Favor %	Oppose %	No Opinion %
1976 survey	46	49	5
1981 survey	46	47	7

	1981 Survey			
	National Totals %	No Children In Schools %	Public School Parents %	Nonpublic School Parents %
Favor proposal	46	47	44	41
Oppose	47	45	51	48
No opinion	7	8	5	11

Women favor this proposal more than men by a margin of 49% to 42%. The 18 to 29 age group — the group most concerned — votes in favor of the proposal by a margin of 64% to 32%. The age group 50 and over opposes the proposal, 55% to 36%. Nonwhites favor the plan by a margin of 66% to 25%; whites oppose the plan, 51% to 42%.

	Child-Care Centers as Part of The Public School System		
	Favor %	Oppose %	No Opinion %
NATIONAL TOTALS	46	47	7
Sex			
Men	42	50	8
Women	49	45	6
Race			
White	42	51	7
Nonwhite	66	25	9
Age			
18 to 29 years	64	32	4
30 to 49 years	41	52	7
50 and over	36	55	9
Community Size			
1 million & over	56	38	6
500,000 - 999,999	55	39	6
50,000 - 499,999	42	49	9
2,500 - 49,999	38	55	7
Under 2,500	41	53	6
Central cities	52	40	8
Education			
Grade school	43	45	12
High school	47	46	7
College	43	52	5
Region			
East	48	42	10
Midwest	37	58	5
South	52	41	7
West	45	48	7

Should Parents of Preschool Children Pay Some of the Costs of Child-Care Centers?

The public agrees that parents should pay part of the costs if their children participate in child-care centers — if and when child-care centers become part of the public school system.

Undoubtedly the proposal to make such centers part of the public school system would gain supporters if some of the tax costs were borne by parents whose children participated.

More than eight in 10 persons agreed that parents should bear part of the costs of these child-care centers — even the age group that would make the greatest use of such child-care centers, those 18 to 29 years of age.

No major group in the population holds a different view from that of the nation as a whole.

The question:

> **Should the parents of preschool children participating in such a program be required to pay some of the costs for this day care?**

The results:

	National Totals %	No Children In Schools %	Public School Parents %	Nonpublic School Parents %
Parents should pay some of the costs of child-care centers	83	82	85	87
Parents should not	10	10	10	7
No opinion	7	8	5	6

A U.S. Department of Education

To a marked degree the question of retaining a Department of Education in the federal government is a political issue. President Reagan has insisted that such a department is not needed and that its functions could be performed by a smaller agency or by other departments of the government. The nation agrees with the President's position by a margin of 49% to 29%. A high percentage of persons (22%) have no opinion on this question, however.

The strongly political nature of the issue can be seen from the fact that individuals who identify themselves as Republicans vote 62% to 20% with the Administration in holding that a federal Department of Education is not needed, while the vote of persons who say they are Democrats is much more evenly divided (40% agreeing, 36% disagreeing).

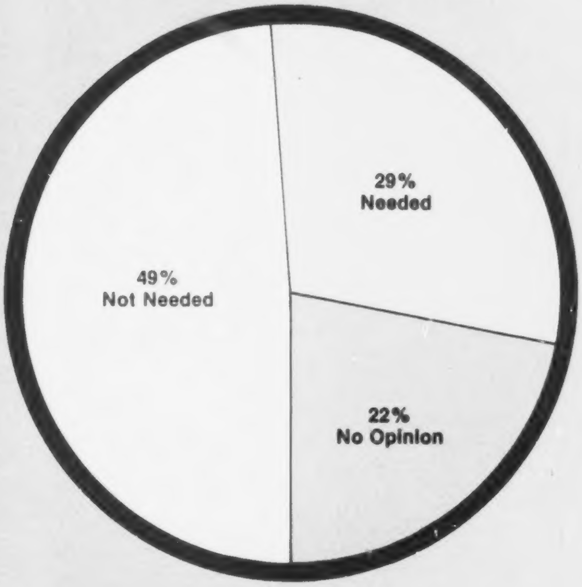
The question:

Two years ago a new Department of Education was established in the federal government in Washington, D.C. The present Administration now says such a department is not needed and that its functions should be performed by a smaller agency or by other departments of the government. Do you agree or disagree with this view?

The results:

	National Totals %	No Children In Schools %	Public School Parents %	Nonpublic School Parents %
Agree that Department of Education is not needed	49	50	48	49
Disagree	29	27	32	34
No opinion	22	23	20	17

Figure 6. Is a U.S. Department of Education Needed?



COMPOSITION OF THE SAMPLE

Analysis of Respondents

Adults	%
No children in schools	65
Public school parents	31*
Nonpublic school parents	6*

*Total exceeds 35% because some parents have children attending more than one kind of school.

Sex	%
Men	48
Women	52

Race	%
White	87
Nonwhite	13

Religion	%
Protestant	57
Catholic	28
Jewish	2
Other	13

Age	%
18 to 24 years	17
25 to 29 years	11
30 to 49 years	36
50 and over	36
Undesignated	*

*Less than one-half of 1%.

Occupation	%
Business & professional	27
Clerical & sales	7
Farm	3
Skilled labor	19
Unskilled labor	21
Non-labor force	17
Undesignated	6

Political affiliation	%
Republican	25
Democrat	40
Independent	32
Other	3

Income	%
$20,000 & over	42
$15,000 — $19,999	14
$10,000 — $14,999	19
$ 7,000 — $ 9,999	8
$ 5,000 — $ 6,999	6
$ 3,000 — $ 4,999	6
Under $3,000	4
Undesignated	1

Region	%
East	25
Midwest	28
South	28
West	19

Community size	%
1 million & over	20
500,000 — 999,999	13
50,000 — 499,999	25
2,500 — 49,999	14
Under 2,500	28

Education	%
Elementary grades	14
High school incomplete	16
High school graduate	34
Technical, trade, or business school	5
College incomplete	16
College graduate	15
Undesignated	*

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*Less than one-half of 1%.

THE DESIGN OF THE SAMPLE

The sampling procedure is designed to produce an approximation of the adult civilian population, age 18 and older, living in the U. S., except for those persons in institutions such as prisons or hospitals.

The design of the sample is that of a replicated probability sample, down to the block level in the case of urban areas and to segments of townships in the case of rural areas. Approximately 300 sampling locations are used in each survey. Interpenetrating samples can be provided for any given study when appropriate.

The sample design included stratification by these four size-of-community strata, using 1970 census data: 1) cities of population 1 million and over; 2) 250,000 — 999,999; 3) 50,000 — 249,999; 4) all other

PACE Materials Available

George Gallup calls them "unique; the first time anyone has ever put together in one package complete instructions for the nonspecialist on how to conduct scientific polls of attitudes and opinion in education."

These are the PACE (Polling Attitudes of the Community on Education) materials, available through Phi Delta Kappa to school districts, regional consortia, and state agencies or groups interested in measuring opinion on vital education questions. These materials can be especially valuable to school officials because they alert decision makers to overall public reaction to a variety of school programs and policies.

Wilmer Bugher, associate executive secretary for administration of Phi Delta Kappa, worked for more than a year to assemble the PACE kit. The Gallup Organization gave advice and help at every stage of development.

The manual tells how to construct the questionnaire, select the sample, train interviewers, and analyze the data. It contains all the questions used in the past 12 annual Gallup Polls of Public Attitudes Toward the Public Schools along with the questionnaires used by the Gallup Organization in locally commissioned surveys. Other survey-related information is included.

For information about using PACE, write or call Wilmer Bugher at Phi Delta Kappa, P.O. Box 789, Bloomington, IN 47402. Ph. 812/339-1156. The price of the 291-page basic kit is $39.50. A "Handbook for Interviewers" is also available. Bugher will consult with PACE users when his schedule permits.

populations. Each of these strata was further stratified into seven geographic regions: New England, Middle Atlantic, East Central, West Central, South, Mountain, and Pacific. Within each city-size/regional stratum, the population was arrayed in geographic order and zoned into equal-sized groups of sampling units. Pairs of localities were selected in each zone, with probability of selection of each locality proportional to its population size in the 1970 census, producing two replicated samples of localities.

Within localities so selected for which the requisite population data are reported, subdivisions were drawn with the probability of selection proportional to size of population. In all other localities, small definable geographic areas were selected with equal probability.

Separately for each survey, within each subdivision so selected for which block statistics are available, a sample of blocks or block clusters is drawn with probability of selection proportional to the number of dwelling units. In all other subdivisions or areas, blocks or segments are drawn at random or with equal probability.

In each cluster of blocks and each segment so selected, a randomly selected starting point is designated on the interviewer's map of the area. Starting at this point, interviewers are required to follow a given direction in the selection of households until their assignment is completed.

Interviewing is conducted at times when adults, in general, are most likely to be at home, which means on weekends, or, if on weekdays, after 4 p.m. for women and after 6 p.m. for men.

Allowance for persons not at home is made by a "times-at-home" weighting procedure rather than by "call-backs."* This procedure is a standard method for reducing the sample bias that would otherwise result from underrepresentation in the sample of persons who are difficult to find at home.

The prestratification by regions is routinely supplemented by fitting each obtained sample to the latest available Census Bureau estimates of the regional distribution of the population. Also, minor adjustments of the sample are made by educational attainment by men and women separately, based on the annual estimates of the Census Bureau (derived from their Current Population Survey) and by age.

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*A. Politz and W. Simmons, "An Attempt to Get the 'Not at Home' into the Sample Without Callbacks," *Journal of the American Statistical Association*, March 1949, pp. 9-31.

SAMPLING TOLERANCES

In interpreting survey results, it should be borne in mind that all sample surveys are subject to sampling error, i.e., the extent to which the results may differ from what would be obtained if the whole population surveyed had been interviewed. The size of such sampling errors depends largely on the number of interviews.

The following tables may be used in estimating the sampling error of any percentage in this report. The computed allowances have taken into account the effect of the sample design upon sampling error. They may be interpreted as indicating the range (plus or minus the figure shown) within which the results of repeated samplings in the same time period could be expected to vary 95% of the time, assuming the same sampling procedure, the same interviewers, and the same questionnaire.

The first table shows how much allowance should be made for the sampling error of a percentage:

Recommended Allowance for Sampling Error of a Percentage

	In Percentage Points (at 95 in 100 confidence level)*						
	Sample Size						
	1,500	1,000	750	600	400	200	100
Percentages near 10	2	2	3	3	4	5	7
Percentages near 20	2	3	4	4	5	7	9
Percentages near 30	3	4	4	4	6	8	10
Percentages near 40	3	4	4	5	6	8	11
Percentages near 50	3	4	4	5	6	8	11
Percentages near 60	3	4	4	5	6	8	11
Percentages near 70	3	4	4	4	6	8	10
Percentages near 80	2	3	4	4	5	7	9
Percentages near 90	2	2	3	3	4	5	7

*The chances are 95 in 100 that the sampling error is not larger than the figures shown.

The table would be used in the following manner: Let us say a reported percentage is 33 for a group that includes 1,500 respondents. We go to the row for "percentages near 30" in the table and across to the column headed "1,500." The number at this point is 3, which means that the 33% obtained in the sample is subject to a sampling error of plus or minus three points. Another way of saying it is that very probably (95 chances out of 100) the average of repeated samplings would be somewhere between 30 and 36, with the most likely figure the 33 obtained.

In comparing survey results in two samples such as, for example, men and women, the question arises as to how large a difference between them must be before one can be reasonably sure that it reflects a *real* difference. In the tables below, the number of points that must be allowed for in such comparisons is indicated.

Two tables are provided. One is for percentages near 20 or 80; the other for percentages near 50. For percentages in between, the error to be allowed for is between those shown in the two tables:

Recommended Allowance for Sampling Error Of the Difference

	In Percentage Points (at 95 in 100 confidence level)*			
TABLE A	**Percentages near 20 or near 80**			
Size of Sample	**750**	**600**	**400**	**200**
750	5			
600	5	6		
400	6	6	7	
200	8	8	8	10
TABLE B	**Percentages near 50**			
Size of Sample	**750**	**600**	**400**	**200**
750	6			
600	7	7		
400	7	8	8	
200	10	10	10	12

*The chances are 95 in 100 that the sampling error is not larger than the figures shown.

Here is an example of how the tables would be used: Let us say that 50% of men respond a certain way and 40% of women respond that way also, for a difference of 10 percentage points between them. Can we say with any assurance that the 10-point difference reflects a real difference between men and women on the question? The sample contains approximately 750 men and 750 women.

Since the percentages are near 50, we consult Table B, and, since the two samples are about 750 persons each, we look for the number in the column headed "750," which is also in the row designated "750." We find the number 6 here. This means that the allowance for error should be six points and that, in concluding that the percentage among men is somewhere between four and 16 points higher than the percentage among women, we should be wrong only about 5% of the time. In other words, we can conclude with considerable confidence that a difference exists in the direction observed and that it amounts to at least four percentage points.

If, in another case, men's responses amount to, say, 22% and women's 24%, we consult Table A, because these percentages are near 20. We look in the column headed "750" and see that the number is 5. Obviously, then, the two-point difference is inconclusive.

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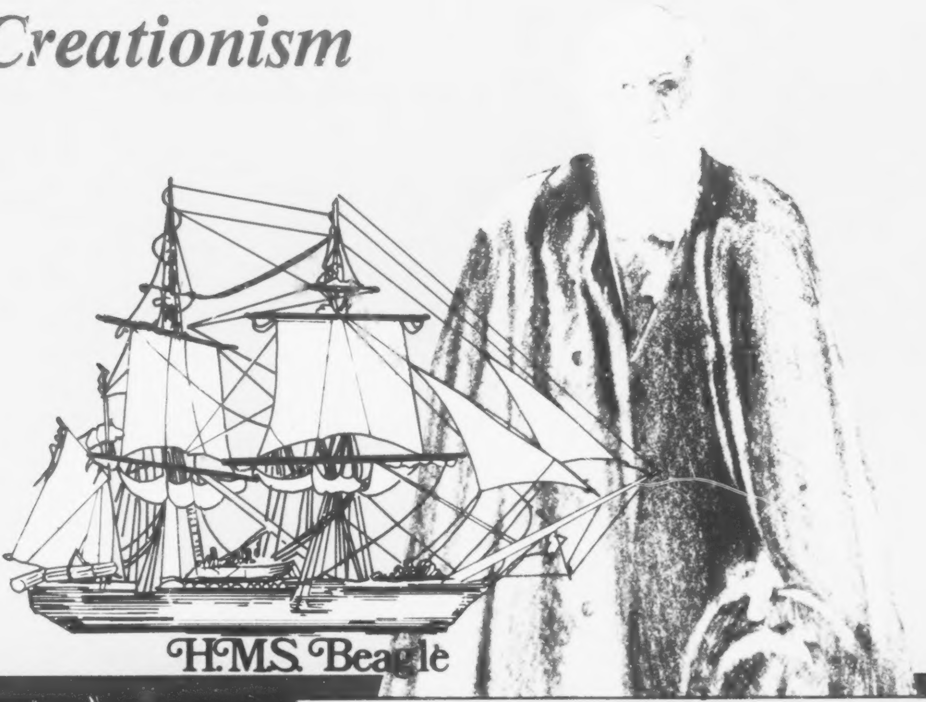
KAPPAN

October 1981

The Minimum Competency Hearings
A Special Section on Teacher Education

Evolution vs. Creationism



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A KAPPAN Special Section on

TEACHER EDUCATION

Do Academically Able Teachers Leave Education? The North Carolina Case

by Phillip C. Schlechty and Victor S. Vance

A longitudinal study of North Carolina teachers reveals, among other findings, that the most academically proficient teachers are also the most likely to leave teaching. The result: a steadily deteriorating talent pool.

For teacher educators, school administrators, classroom teachers, and education researchers, the relationship between measured academic ability and teacher competence seems problematic. For many legislators and others in positions to influence policy with regard to teacher education — and for many critics of teacher education as well — there is nothing problematic about the relationship. For policy makers and critics, the relevant facts are these:

- There is considerable evidence that those who choose to major in teacher education are, as a group, less academically able than most other college majors.[1]
- There is some strong evidence that graduates of teacher education institutions are not as academically proficient as most other categories of college graduates.[2]
- There is now some evidence to suggest that some teacher education graduates do not perform as well on tests of academic achievement as do many of the students they intend to teach.[3]

These facts, coupled with the accountability movement and reports in the popular press of an oversupply of teachers, have encouraged teacher educators, state boards of education, and state legislators to seek ways of upgrading standards for admission to teaching.

Most teacher educators are uneasy about using measures of academic ability as predictors of teaching skill. But the fact remains that, in recent years, more than half the states have actively considered screening prospective teachers through the use of tests that — either implicitly or explicitly — measure academic ability. Researchers may quarrel with the assumption that measures of academic ability can predict teaching competence. Many policy makers seem willing to bet, however, that people who perform poorly on tests of academic ability will not, as a group, make good teachers.

Efforts to reform teacher education by raising the entrance and exit criteria in teacher education institutions are predicated on two implicit assumptions: 1) that teaching, as an occupation, is sufficiently attractive to academically able individuals to assure an adequate supply of teachers and 2) that the able persons who are attracted to teaching will also be likely to remain in the classroom for a reasonable period of time. Findings from our recent study at the University of North Carolina prompt us to question both of these assumptions.

Consistent with earlier studies,[4] our findings indicate that, as a group, those who enter teaching — in North Carolina, at least — score less well on measures of academic ability than did prospective teachers in the recent past. Consistent with popular opinion, our findings indicate that those most likely to leave teaching early and in the greatest numbers come from the ranks of the more academically able. Finally, our findings indicate that those who are likely to stay in the classroom the longest and in the greatest numbers come from the ranks of the least academically able. In this article we shall look closely at the study from which we have drawn these conclusions.

The study addressed several related questions. First, we asked whether the general demographic profile of entering teachers in the state of North Carolina had changed in recent years. Given the general pattern of economic uncertainty, it seemed reasonable to expect that persons who landed teaching jobs in recent years would be more likely to remain in the classroom than were teachers in the past. The apparent improvement in job opportunities for women and minorities also seemed likely to have caused a decline in the proportion of females and blacks entering teaching. Moreover, expanding opportunities might well have encouraged more females and blacks to leave education in recent years than in the past. The literature also suggests that burnout has accelerated the departure of teachers from the profession.

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"[P]olicies that attend only to selection criteria for teacher education programs may do nothing more than produce a teacher shortage."

Our interest in academic ability stemmed from the generally accepted fact that persons who score well on measures of academic ability have educational and job opportunities available to them that are usually denied to those who score poorly. Thus it seemed reasonable to expect that teachers who scored well on measures of academic ability would be more likely to opt out of teaching than their lower-scoring colleagues — if only because they had more opportunities to do so. On the other hand, if we assume that a relationship exists between academic ability and teacher competence, it is important to know how well the schools are doing in holding the more academically able. Stated directly, if academically able individuals are not attracted to teaching (which seems to be the case) or if academically able teachers are more likely than others to leave the classroom, then policies that attend only to selection criteria for teacher education programs may do nothing more than produce a teacher shortage.

To gain some insight into this issue, we examined the career histories of teachers who scored high or low on existing measures of academic ability. The Division of Teacher Certification, North Carolina State Department of Public Instruction, provided the data file, from which we selected all certified regular classroom teachers who entered teaching in North Carolina during the years 1973 to 1980 (N = 32,131) and who had no prior teaching experience. The variables of concern in this study were race, sex, the National Teacher Examination (NTE) common score, the year of entry into teaching, and whether the teacher was employed in North Carolina schools in the years following the entry year. Data on race, sex, and employment history were available for more than 98% of the cases. Because the state of North Carolina requires the NTE as part of the certification process, NTE common scores were also available for most of the population. However, as Table 1 shows, NTE scores were available for proportionally fewer teachers who entered the field in 1976, 1977, and 1978. The NTE was suspended as a certification requirement during those years, in response to court suits challenging the validity of the test. The NTE was restored to use in 1979, following a court ruling in favor of the state of North Carolina. Thus data relating to academic ability for the years 1976, 1977, and 1978 are more subject to possible sample bias than are data from other years that we studied.

As the reader probably knows, the NTE was not designed as a measure of academic ability. However, significant correlations have been demonstrated between NTE scores and established measures of academic ability, e.g., grade-point averages, Graduate Record Examination scores, Scholastic Aptitude Test scores.[5] The NTE common score is therefore a defensible proxy measure of academic ability.

Once we had identified the population, we grouped subjects according to the year of entry into teaching. We further divided these groups by race, because we had reason to believe that blacks and whites would score differently on the NTE.[6] As Table 1 indicates, this proved to be the case in North Carolina.

Having divided the sample by entering year and race, we computed a number of statistics, including percentages of distribution by race and sex, mean NTE scores for each group, the annual retention rate, and the cumulative retention rate. The annual retention rate is that proportion of teachers who were teaching in a given year and who continued teaching in the following year. The cumulative retention rate is that proportion of an entering group who remained in teaching in any subsequent year. For example, to find the fall 1976 retention rate for the group that entered teaching in 1973, we divided the number of 1973 entrants who were in education in 1976 by the number of 1973 entrants who were in education in 1975. This yielded the *annual* retention rate for the fall of 1976. To find the *cumulative* retention rate for the 1973 group, we used the number of subjects in the 1973 group as the divisor for any subsequent year.

As Table 1 shows, the attractiveness of teaching as an occupation changed very little for North Carolinians of either sex during the years 1973 to 1980. The fewest white males — both relatively and absolutely — entered teaching in 1979 and 1980, but the difference from preceding years is very small. Slightly more black males entered education in 1979 and 1980 than was the case in 1973 and 1974.

The data show substantial fluctuations in the absolute numbers and modest fluctuations in the relative proportions of blacks entering teaching (Table 1). For example, the study population for 1980 contained 403 inexperienced black teachers, down from 723 in 1977. However, the 403 still represent a larger proportion of blacks in the population (13.32%) than was the case in 1973 and 1974 (11.74% and 12.33% respectively).

The years 1976, 1977, and 1978, which contain the largest proportion of persons not required to take the NTE, also contain the largest proportion of blacks. Those same years were also peak years for the recruitment of white males. This may suggest that the use of the NTE disproportionately affects the opportunity of blacks and of white males to enter teaching. However, the differences in both cases are too small to demonstrate a causal link between the use of NTE scores for certification and the decline in the proportion of blacks and of white males entering the teaching occupation.

The persistent pattern of decline in the NTE common score for white females is perhaps the most interesting data from our profile of entry-level teachers in North Carolina. Given the fact that white females constitute such a large proportion of the study population (approximately 67%), this pattern of decline is also reflected in the study population as a whole. However, an inspection of mean scores for white males and for blacks of both genders indicates no persistent pattern of decline for these groups. All three groups have experienced substantial upturns and downturns in scores, however.

We can gain a clearer picture of the dimensions of the decline for white females by considering changes in the way NTE scores are distributed. For example, NTE scores were available for 2,609 white females in 1973 and for 2,062 white

Table 1. Race and Sex by Entering Year, 1973-80

		1973		1974		1975		1976		1977		1978		1979		1980	
		N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Total		**3,950**	**100**	**4,919**	**100**	**4,748**	**100**	**4,037**	**100**	**4,251**	**100**	**3,573**	**100**	**3,666**	**100**	**3,023**	**100**
NTE Not Avail.		**230**	**5.82**	**219**	**4.45**	**251**	**5.28**	**722**	**17.88**	**1,598**	**37.59**	**471**	**13.18**	**194**	**5.29**	**75**	**2.48**
White Females	NTE Avail.	2,609	66.05	3,341	67.92	3,128	65.88	2,381	58.97	1,912	44.97	2,053	57.45	2,358	64.32	2,062	68.21
	NTE Not Avail.	104	2.63	89	1.80	81	1.70	349	8.64	820	19.28	217	6.07	101	2.75	25	.82
	Total*	2,713	68.68	3,430	69.72	3,209	67.58	2,730	67.62	2,732	64.26	2,270	63.53	2,459	67.07	2,087	69.03
White Males	NTE Avail.	689	17.44	784	15.93	776	16.34	572	14.16	458	10.77	538	15.05	549	14.97	494	16.34
	NTE Not Avail.	52	1.31	47	.95	48	1.01	123	3.04	302	7.10	109	3.05	34	.92	14	.46
	Total*	741	18.75	831	16.89	824	17.35	695	17.21	760	17.87	674	18.10	583	15.90	508	16.80
Black Females	NTE Avail.	303	7.67	438	8.90	444	9.35	279	6.91	226	5.31	373	10.43	426	11.63	297	9.82
	NTE Not Avail	51	1.29	57	1.15	86	1.81	169	4.18	354	8.32	104	2.91	42	1.14	23	.76
	Total*	354	8.96	495	10.06	530	11.16	448	11.09	580	13.64	477	13.35	468	12.76	320	10.58
Black Males	NTE Avail.	91	2.30	91	1.84	112	2.35	69	1.70	40	.94	108	3.02	103	2.80	73	2.41
	NTE Not Avail.	19	.48	21	.42	28	.58	75	1.85	103	2.42	36	1.00	12	.32	10	.33
	Total*	110	2.78	112	2.27	140	2.94	144	3.56	143	3.36	144	4.03	115	3.13	83	2.74
Other	NTE Avail.	28	1.07	33	.67	36	.75	14	.34	16	.37	30	.83	33	.90	20	.66
	NTE Not Avail.	4	.10	5	.10	8	.16	6	.14	19	.44	5	.13	5	.13	3	.09
	Total*	32	.81	38	.77	44	.92	20	.49	35	.82	35	.97	38	1.03	23	.76

*Percentages may not add to 100 due to rounding.

females in 1980. There were 104 white females for whom test scores were not available in 1973 and 25 for whom scores were not available in 1980. There were therefore 626 fewer white females in the total 1980 population than in 1973, a decline of 23.07%. In the sample population, which comprised only those who had NTE scores available, the decline was 20.97%, because proportionately fewer NTE scores were missing in 1980 than in 1973.

Assuming that those for whom NTE scores are available are representative of the white females who entered teaching in North Carolina in 1973 and 1980, a number of useful comparisons are possible. (Remember that the absolute difference in the number of new teachers in 1973 and 1980 reflects an overall reduction by 1980 in the number of job openings.) When we contrast the way scores are distributed in 1973 and 1980, some very marked differences appear.

For example, 1,294 white females in 1973 scored below 610 (the 1973 median) and 1,301 scored above 610. Fourteen scored exactly 610. By contrast, 1,235 white females in 1980 scored below 610 and only 817 scored above 610. Ten scored exactly 610. Thus, while there was an overall decline from 1973 to 1980 in the number of white females employed, most of this decline occurred among high-scoring females, i.e., those who scored above 610. Indeed, in 1980 the state of North Carolina employed only 59 fewer low-scoring white females than was the case in 1973. This represents a reduction of 4.6% in the number of low-scoring white females employed in 1980, compared with 1973. By contrast, the state of North Carolina employed 484 fewer white females who scored above 610 in 1980 than was the case in 1973. This represents a 37% decline in the number of high-scoring white females employed in 1980, compared with 1973.

On the surface, these data appear consistent with W. Timothy Weaver's conclusion: One of the major effects of the declining demand for teachers has been a decline in the overall quality of the teacher supply.[7] But the data also show that, while the proportion of relatively high-scoring white females was declining from 1973 to 1980, the proportion of relatively high-scoring white males remained stable. (See Table 2 for median NTE scores for white males.) The years 1978 and 1979 show downturns in the median scores for black females, a trend consistent with that for white females. But the median score for black females in 1980 is exactly the same as it was in 1973. Scores for black males reflect an erratic pattern, which is probably a statistical artifact attributable to the relatively small number of black males in the population.

These data suggest that Weaver's hypothesis regarding the cause of the overall decline in academic ability of the talent pool in education may need some modification. From Weaver's perspective, the decline can be attributed primarily to factors within education, e.g., declining enrollment, the press on teacher training institutions to maintain numbers by lowering standards, and so on. Our data suggest that factors outside of education may be equally or more important.

It seems reasonable to argue from our data that the decline of opportunities in education is perhaps of less significance than the expansion of employment opportunities in other segments of the economy. White males who enter teaching, as a group, have not declined in ability, but white females who enter teaching have declined. This suggests that there are market forces at work that affect females differently than males. The fact that the

Table 2. Cumulative Retention Rates by Entering Year for White Females and White Males, 1973-1980

WHITE FEMALES
Cumulative Retention Rates by Calendar Year

	Entering Year	1973	1974	1975	1976	1977	1978	1979	1980
Observation Year	1973	100.00							
	1974	82.63	100.00						
	1975	73.47	85.06	100.00					
	1976	68.03	77.64	85.16	100.00				
	1977	61.17	70.69	76.88	85.13	100.00			
	1978	57.60	65.99	70.58	79.42	85.14	100.00		
	1979	54.96	60.10	65.28	74.25	79.18	85.48	100.00	
	1980	52.93	59.59	60.77	68.62	72.17	77.20	85.36	100.00
Mean NTE Commons		610.20	601.74	603.10	599.99	598.20	599.48	591.50	593.61
Median NTE Commons		610.00	602.00	602.00	598.00	596.00	599.00	593.00	593.00
Standard Deviation		72.88	73.50	73.80	75.42	75.49	72.99	70.00	70.97

WHITE MALES
Cumulative Retention Rates by Calendar Year

	Entering Year	1973	1974	1975	1976	1977	1978	1979	1980
Observation Year	1973	100.00							
	1974	81.27	100.00						
	1975	75.18	83.80	100.00					
	1976	71.84	79.08	84.92	100.00				
	1977	67.92	71.93	75.51	83.91	100.00			
	1978	64.58	66.19	68.68	76.74	83.18	100.00		
	1979	61.24	63.01	63.14	72.02	75.76	84.75	100.00	
	1980	57.76	58.92	57.60	66.78	66.15	75.83	81.42	100.00
Mean NTE Commons		595.70	595.65	596.67	600.61	596.69	605.39	596.04	594.79
Median NTE Commons		591.00	593.00	592.00	602.00	596.00	599.00	596.00	591.50
Standard Deviation		81.48	81.21	80.19	81.08	83.96	85.49	77.38	78.43

NTE scores of white males have remained so constant suggests that these market forces, whatever they are, may be having little or no effect on the male population that chooses to enter teaching. The fact that the mean and median NTE scores for white females are now approximately the same as for white males — in fact, somewhat lower — further supports the idea that academically able females, who traditionally had few options other than teaching, are now opting *not* to teach.

Our data do present some problems for our thesis, just as they do for the thesis that Weaver has advanced. Specifically, at the same time that occupational opportunities outside of teaching are becoming more available to white females, these opportunities are also becoming more available to blacks. Yet blacks of both sexes in our sample fail to show the same pattern of decline in academic ability as do white females. We must account for this fact, if our thesis is to hold. There are three possible sources of explanation, short of declaring our thesis invalid.

First, the number of blacks in the population — especially black males — is so small that it is statistically less defensible to rule out chance as an explanation than in the case of white females. If, however, one accepts these fluctuations as real, not merely a statistical artifact, it is clear that the pattern of decline in academic ability for black males parallels that for white females during the period from 1973 through 1977. Only the years 1978 and 1979 interrupt this pattern in any dramatic way. Furthermore, the year 1980, which contains the smallest number of black males, is also the year when the median NTE score for black males was lowest (481) except for 1978, when the median score was probably affected by litigation regarding the validity of the NTE.

Thus, if there is any pattern in the recruitment of black males, the pattern is clearly consistent with our thesis. That is, increasing opportunities in other segments of the economy may be the primary causal mechanism that accounts for the apparent decline in the overall academic ability of the teaching corps. It is certainly hard to deny that white females and black males are the two groups most likely to be affected by broadened occupational opportunities. Moreover, these two groups are the only groups in our study that indicate the pattern our thesis would suggest.

A second explanation for the failure of our thesis to be demonstrated as clearly among blacks as it is among white females rests on the nature of the NTE and the relative scores of blacks on that instrument. Donald Medley and Thomas Quirk have demonstrated that blacks score lower as a group on the NTE than do whites.[8] In our study, more than 80% of the black population scored below the median for the total group. This suggests that the black segment of our total population does not perform particularly well on tests measuring academic ability. Furthermore, since teacher education majors generally score lower on measures of academic ability than do other college graduates, and since there is no evidence that schools employ a disproportionate number of those teacher education majors who earn high scores,[9] it is reasonable to infer that the black segment of this population is drawn disproportionately from among those black college graduates who score lowest on measures of academic ability. This makes it more difficult to interpret the meaning of ability measures for the black segment of our population than for the white segment.

Finally, the blacks in this population — especially the black females — are likely to be natives of North Carolina and of rural origins. Thus the religious heritage and orientation toward service that typify many well-educated Southern blacks may have influenced some of them to enter teaching, even when other occupational opportunities were available. It would not be surprising if some North Carolina blacks chose teaching over other occupa-

"[T]here is a strong negative relationship between measured academic ability and retention in teaching."

tional opportunities, because the subcultural value structure would encourage them to do so.

Having described the general characteristics of those who entered teaching in North Carolina between 1973 and 1980, we turned our attention to describing patterns of retention in teaching. We asked this basic question: Has the holding power of the education occupation changed in the state over the past seven years? We were also interested in determining whether there were between-group differences (male/female, black/white) in teacher retention. If such differences existed, were they correlated with measured academic ability?

We decided that the most liberal estimate of the holding power of teaching — and, conversely, the most conservative estimate of teacher dropouts — would come from considering anyone who was employed in education, regardless of position (i.e., administrator, guidance counselor, etc.), as still in teaching. Many people — especially those who entered teaching in the earlier years of the period under study — had, by 1980, left the classroom and accepted other education-related occupations. (From 5% to 10% of the population in the years 1973 to 1975 made such choices in the first four years of teaching.) Therefore, the classroom teacher dropout rate reported here is an underestimation.

As Tables 2 and 3 indicate, there has been no substantial change in the holding power of education for either white females or white males. Generally speaking, approximately 15% of white females leave education in North Carolina at the end of the first year. Cumulatively, 47% have left teaching by the end of the seventh year. In the early years, white males leave at a slightly more rapid rate than white females; in later years, the reverse is true.

Generally, education has more holding power for blacks than for whites. However, the retention rates for blacks who entered teaching in 1978 and 1979 suggest that this pattern may be changing. Of those blacks who entered teaching in 1978, for example, 17.43% of the females and 18.52% of the males had left by the end of the first year. By the end of the second year, 24.13% of the females and 29.63% of the males had left. Except for 1973, there have been no other entering groups of blacks who have left so soon or in such numbers. The differences are small, however, and they may be attributable to chance.

Looking at the earlier (1973 through 1976) entering groups gives the most detailed picture of the relative holding power of education. For white females, it appears that the long-term holding power of education may have increased slightly. After four years of teaching, 61.19% of the 1973 entering group of white females were still in education, compared with 68.62% of the 1976 entering group of white females. No similar pattern is apparent for white males.

There is some indication that black females who entered teaching in 1973 and 1974 were somewhat more likely to remain than those who entered later. Again, however, the numbers and differences are too small to rule out chance as an explanation. Among black males, the pattern is more unusual, but it tends in the direction of that for white females and black females. Again, however, for statistical reasons we urge caution in interpreting the data.

What these data indicate, we believe, is that — in the state of North Carolina, at least — there has been a modest increase in the overall ability of education to retain teachers once they are employed, but this increase does not approximate the dimensions suggested by those who say that there is virtually no turnover in the teaching corps. First-year teachers continue to leave at a rate of about 15% per year; second-year teachers at about 10% per year; third-year teachers at about 10% per year; and fourth-, fifth-, and sixth-year teachers at an annual rate of 5% to 7% per year. The cumulative effect of this dropout rate is that, by the ninth year of teaching, approximately 50% of those initially employed to teach will still remain in education.

The next step in this study was to consider the relationship between measured academic ability and retention in teaching. First, we placed entering teachers into 10 ranks, according to their scores on the NTE Common Examination. Each rank represented 10% of each group. It is important to understand that, in developing the ranks, the entering groups for each year (1973 through 1980) were treated separately and racial groupings were established *prior* to ranking. We ranked each entering group separately because their mean scores indicated a consistent pattern of test score decline between 1973 and 1980. Available evidence indicates that annual versions of the NTE Common Examination, while different from one another, are directly comparable.[10] Nonetheless, we decided to rank each year separately as a precaution, instead of developing a single ranking for the total group.

We separated racial groups before ranking for two reasons. First, the obvious differences in the mean scores of blacks and whites suggested systematic between-group differences for which controls were needed. Second, since blacks typically score toward the low end of the population, and since blacks tend to stay in teaching longer and in proportionately greater numbers, aggregating blacks and whites would be likely to distort the relationship between academic ability and retention, especially at the low end of the ability continuum.

Using the system of rankings described above, we computed annual and cumulative dropout rates for each entering group by rank and by sex. The result was a series of tables that enabled us to examine the annual and cumulative dropout rate for any group and for any rank within the groups at any year subsequent to entering into teaching.

Inspection of these tables led us to conclude that *there is a strong negative relationship between measured academic ability and retention in teaching.* This relationship is most pronounced among whites, but it is present among blacks as well.

For example, the overall cumulative retention rate as of the fall of 1980 (the seventh year of teaching) for white females who entered teaching in 1973 was 52.93%. For the white females ranked in the top 10% on the NTE, the cumulative retention rate was 37.30%. Those who ranked in the bottom 10% on the NTE had a cumulative retention rate of 62.50%. In fact, the relationship between measured academic ability and retention in teaching is nearly linear. This is best illustrated by considering the cumulative retention rate in 1980 for the white females who entered teaching in 1973: rank 1 (the top rank) = 37.30%, rank 2 = 46.07%, rank 3 = 49.26%, rank 4 = 49.82%, rank 5 = 55.05%, rank 6 = 56.57%, rank 7 = 58.14%, rank 8 = 58.56%, rank 9 = 57.82%, and rank 10 = 62.50%.

For white males, the 1973 entering group reflects the weakest relationship between measured academic ability and retention rate of all entering groups of white males. Even for this group, a negative relationship exists, however. The cumulative retention rate in 1980 for the white males who entered teaching in 1973 is as

"[F]or all white groups . . . those in the higher-ability ranges leave teaching in greater proportionate numbers than do those in the lower-ability ranges."

Table 3. Cumulative Retention Rates by Entering Year for Black Females and Black Males, 1973-1980

BLACK FEMALES
Cumulative Retention Rates by Calendar Year

Entering Year		1973	1974	1975	1976	1977	1978	1979	1980
Observation Year	1973	100.00							
	1974	79.20	100.00						
	1975	73.92	83.78	100.00					
	1976	72.93	82.19	84.00	100.00				
	1977	71.94	78.76	80.18	88.53	100.00			
	1978	68.64	74.20	76.80	83.15	84.07	100.00		
	1979	67.32	72.37	76.35	78.49	79.20	82.57	100.00	
	1980	64.35	70.09	72.74	77.06	77.43	75.87	77.23	100.00
Mean NTE Commons		505.13	501.82	504.39	510.38	500.85	490.79	492.83	503.97
Median NTE Commons		497.00	494.00	492.00	499.00	493.50	480.00	487.00	497.00
Standard Deviation		66.28	57.40	62.00	66.36	75.48	65.40	62.82	54.67

BLACK MALES
Cumulative Retention Rates by Calendar Year

Entering Year		1973	1974	1975	1976	1977	1978	1979	1980
Observation Year	1973	100.00							
	1974	78.02	100.00						
	1975	68.13	89.01	100.00					
	1976	63.73	82.41	89.28	100.00				
	1977	63.73	74.72	85.71	89.85	100.00			
	1978	61.53	74.72	81.25	84.05	87.50	100.00		
	1979	52.74	69.23	77.67	75.36	87.50	81.48	100.00	
	1980	52.74	69.23	77.67	75.36	85.00	70.37	73.78	100.00
Mean NTE Commons		502.96	501.22	497.59	496.97	480.97	470.98	500.54	492.74
Median NTE Commons		495.00	486.00	484.50	489.00	486.50	465.00	490.00	481.00
Standard Deviation		67.39	63.41	56.66	63.47	55.49	61.70	66.68	59.04

follows: rank 1 = 52.70%, rank 2 = 50.87%, rank 3 = 48%, rank 4 = 60.34%, rank 5 = 53.96%, rank 6 = 64.15%, rank 7 = 52.11%, rank 8 = 59.21%, rank 9 = 65.43%, and rank 10 = 64.15%. The pattern for white males who entered teaching in 1974 — more typical of patterns for subsequent entering groups — is as follows: rank 1 = 39.75%, rank 2 = 49.33%, rank 3 = 46.83%, rank 4 = 61.19%, rank 5 = 62.68%, rank 6 = 60%, rank 7 = 65.47%, rank 8 = 60.52%, rank 9 = 64.19%, and rank 10 = 74.76%.

Most impressive is the fact that, each year subsequent to entry (and this is true for all white groups and subgroups), those in the higher-ability ranges leave teaching in greater proportionate numbers than do those in the lower-ability ranges. For example, between 1979 and 1980, 11.48% of the remaining white females from the 1973 group who scored in the top 10% for that group left education, whereas the mean annual departure rate for the group was 5.69%. For white males who entered teaching in 1974, 13.16% of the top 10% left teaching at the end of the 1979 year, as compared to 6.48% of their peers.

Before leaving this discussion of the relationship between measured ability and retention rates for white teachers, the reader should understand that the annual and cumulative retention rates for white females in 1973 and for white males in 1974 are paralleled by subsequent entering groups. However, subsequent groups have not matured to the point of these two groups. Therefore, we have chosen to use these older groups to illustrate our findings. We can also account for the somewhat less clear relationship of retention to ability among the white males who entered teaching in 1973. Subsequent analysis revealed that a substantial proportion of the white males in the 1973 group acquired positions outside the classroom in the first four years following entry. This was not true of later groups.

With regard to retention patterns in the early years, two points should be made. First, for all white groups, those who leave teaching early are more likely to be drawn from high-scoring populations than from low-scoring populations. Using the 1978 population as a base, the following data illustrate this point. At the end of the first year, 19.67% of the top 10% of white females left education in North Carolina, and 21.11% of the second rank of white females left. By contrast, 15.17% of white females in the ninth rank left, and only 12.19% of white females in the 10th rank left. By the end of the second year (1980), 34.27% of the top rank and 33.17% of the second rank had left, compared with 18.49% of the ninth rank and 18.28% of the 10th rank. White males entering in 1978 reflect a similar pattern. Approximately 37.50% of the top two ranks had left teaching by the end of the second year, but only about 24% of the bottom two ranks had done so.

As we have already pointed out, our data do not reflect as clear a relationship between measured ability and retention in teaching for blacks as for whites. We think this fact can be explained by characteristics of the black population and characteristics of the NTE scores that we discussed earlier.[11]

In summary, our study seems to warrant the following conclusions:

- Between 1973 and 1980 the academic

ability of beginning teachers in North Carolina showed a general pattern of decline. Most of this decline is accounted for by the decline in academic ability of white females.

- There is some indication that education in North Carolina has increased in its ability to retain teachers in recent years. This tendency is not strong, however; it certainly does not approximate the dimensions suggested by those who say that teacher turnover does not exist. It seems reasonable to project from our data that approximately half of those who entered teaching in 1980 will no longer be teaching in 1990.
- There is a strong negative correlation between measured academic ability and retention in teaching. Year after year, those North Carolina teachers who scored highest on a test of academic ability (the NTE) are the most likely to leave education.

These conclusions suggest that whatever success North Carolina is having in retaining more teachers is focused on the least academically able, not the most academically able. Thus the combined effects of recruitment and retention in North Carolina appear to be yielding a steadily deteriorating talent pool, as measured by a test of academic ability.

The set of data available for this study made it possible to do a longitudinal analysis of dropout rates over an extended period of time. Unfortunately, these data are limited to one state, and the conditions of teaching in that state are not typical of the U.S. as a whole. Salaries in North Carolina are lower than average, teacher organizations are less well developed, and funding for public education is lower than in most other sections of the U.S. Thus it may be that the findings presented here are unique to North Carolina or to the Southeastern states.

To our knowledge, there are no directly comparable longitudinal national studies that would allow us to determine if the patterns we have reported are unique. However, studies of national populations of college graduates have reflected patterns consistent with those we found.[12] Other studies using more limited samples suggest that the patterns we have reported are not unique to North Carolina or to the Southeastern U.S.[13] Thus there is logical reason to argue that the patterns we found in North Carolina are probably typical of the U.S. In a statistical sense, however, such an argument cannot be made.

If the findings reported here are typical of the U.S., there are numerous policy implications. We shall list only those that seem most critical. First and foremost, the data we have presented suggest that those who would improve the quality of the teaching corps by concentrating on standards for admission to teacher education or standards for certification are taking a truncated view of the problem. Without denying that teacher education institutions graduate too many people who are ill-equipped to teach, we must point out that policies aimed at keeping out less able teachers do not assure that more able teachers will enter education. Neither do such policies assure that more able teachers will stay in teaching once they have entered.

Second, to look inside education for solutions to problems of teacher quality is not adequate. Since World War II, the human service sector has been one of the largest growth sectors in the U.S. economy. Thus there has been increasing competition for service-oriented men and women with relatively high academic ability. Many of these new occupations carry more salary and prestige than teaching. Moreover, the women's movement and the civil rights movement have begun to open new occupational opportunities for segments of the population who in the past were virtually forced into teaching. Clearly, if policy makers wish to improve the quality of teachers, they must attend to the quality of life that teaching provides new entrants.

Finally, it seems clear that any effort to reform teacher education — unless it is coupled with systematic efforts to reform the structure of teaching and the work lives of teachers — will have little chance of success. Indeed, such an effort may prove dysfunctional. If teacher education becomes more rigorous and demanding, for example, it seems likely that many of the most academically able teachers who now enter teaching will choose not to do so — simply because, with the same effort and commitment, they can get more of what society has to offer from other occupations.

It will be easy for critics of education to use the data we have presented to blame the victims. The victims, in our view, are teachers, teacher education institutions, and the children these teachers and institutions serve. We are not apologists for incompetent teachers, nor are we apologists for inadequate teacher education programs. We do not, however, think we are apologizing when we point out that the quality of teachers who serve in our schools is at least as much a function of the quality of life teaching affords as it is a function of admissions standards and scores on tests.

"No, Jimmy, teachers don't know everything. If we were that *smart, we'd be doing something that pays."*

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1. W. Timothy Weaver, "In Search of Quality: The Need for Talent in Teaching," *Phi Delta Kappan*, September 1979, pp. 29-32, 46.

2. Ibid. See also James D. Koerner, *The Miseducation of American Teachers* (Boston: Houghton Mifflin, 1963).

3. Gene Lyons, "Why Teachers Can't Teach," *Texas Monthly*, September 1979, pp. 122-28, 208-20.

4. Weaver, op. cit.

5. See, for example, Quincy Whitfield Ayres, "The Impact of Racial Segregation on Student Achievement and I.Q." (Doctoral dissertation, University of North Carolina at Chapel Hill, 1979); B. G. Johnson, "The Prediction of Success in the Doctoral Program in the College of Education at the University of Houston on the Basis of Objective Test Scores and Quality Point Averages" (Doctoral dissertation, University of Houston, 1963); and B. Pitcher, "The Relation of Academic Success in Teacher Preparatory Curricula to Scores on the NTE Common Examinations," *ETS Statistical Report* (Princeton, N.J.: Educational Testing Service, 1962).

6. Donald M. Medley and Thomas J. Quirk, "The Application of a Factorial Design to the Study of Cultural Bias in General Culture Items on the National Teacher Examination," *Journal of Educational Measurement*, Winter 1974, pp. 235-45.

7. Weaver, op. cit. See also W. Timothy Weaver, "Educators in Supply and Demand: Effects on Quality," *School Review*, August 1978, pp. 552-93.

8. Medley and Quirk, op. cit.

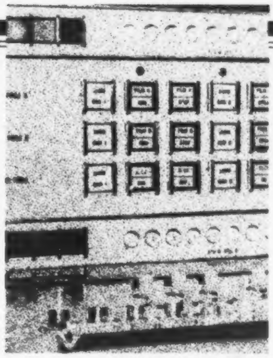
9. Weaver, "In Search of Quality. . . ."

10. Thomas J. Quirk, Barbara J. Witten, and Susan F. Weinberg, "Review of Studies of the Concurrent and Predictive Validity of the National Teacher Examinations," *Review of Educational Research*, Winter 1973, pp. 89-113.

11. Space limitations prevent us from including all the tables and data on which our conclusions are based. The full report is available to those readers who are willing to bear the expense of reproducing the document. Copies can be ordered from the authors, School of Education, University of North Carolina at Chapel Hill, Peabody Hall 037 A, Chapel Hill, NC 27514.

12. Weaver, "In Search of Quality . . ."; and Laura M. Sharp and Sarina B. Hirshfield, *Who Are the New Teachers? A Look at the 1971 College Graduates* (Washington, D.C.: Bureau of Social Science Research, 1975).

13. Ronald M. Pavalko, "Recruitment to Teaching: Patterns of Selection and Retention," *Sociology of Education*, Summer 1970, pp. 340-55.



RESEARCH

Sex Differences in Mathematics Achievement — Are They Real?

by Robert M. Hashway

Considerable research in the Sixties and Seventies indicated that males and females differ in their mathematical abilities.[1] All of these studies used norm-referenced achievement tests, which are designed to discriminate maximally between students. But many psychometrists have argued that norm-referenced tests do not indicate what an individual can and can not accomplish.[2] Are sex differences in mathematics achievement real, or are they artifacts of the types of tests that researchers have used?

To answer this question, I tested 4,899 freshmen in the Massachusetts State College System (MSCS) during orientation activities in autumn of 1979, using the domain-referenced Mathematics Placement Test developed by MSCS. This test, designed by a task force of MSCS mathematics faculty members, measures 148 mathematics skills that incoming freshmen are expected to have mastered. Like other domain-referenced tests, it yields scores that can be interpreted in terms of what individual students can and can not accomplish.[3]

The 148 mathematics skills are formulated in terms of behavior specifications.[4] These 148 behavior specifications are organized into 64 learning modules according to a mathematics behavior taxonomy. For each module, the terminal behavior is specified.[5] The modules are organized into eight learning units that correspond to eight behavior domains: whole number arithmetic; fractions; decimals; ratio, proportion, and percent; tables and graphs; integer arithmetic; elementary geometric principles; and elementary algebraic principles.

Test items were written for each terminal behavior. Item forms were also developed for each terminal behavior.[6] Random numbers corresponding to the constraints specified by the item forms were generated by computer, resulting in a pool of items for each terminal behavior. Items were randomly selected from each item pool and randomly assigned to positions in the test. The test reliability ranged from .90 to .93. In addition, the eight domain scores exhibited a high degree of psychometric (factorial) validity.[7]

The freshmen I tested are generally representative of those enrolled in most U.S. state colleges. Table 1 shows average test scores for males and females in each of the eight domains. To detect achievement differences between the sexes, I used one-way analyses of variance.

I found that males and females did not differ significantly in their achievement in five of the eight domains. The two sexes performed equally well in the areas of whole number arithmetic, decimals, integer arithmetic, graphs and tables, and elementary algebra.

However, females showed a significantly higher ability to deal with problems involving fractions than did males ($p < .01$). Males, on the other hand, were significantly more proficient than females at solving problems involving elementary geometric principles ($p < .01$) and those involving ratio, proportion, or percent ($p < .01$).

"[A]bout 98% of the differences between individuals in mathematical achievement can apparently be attributed to some characteristic other than sex."

These findings, along with further analysis of the data, suggest that male/female differences in mathematical ability have been exaggerated. In the three domains for which I found significant sex differences, these differences account for less than 1.5% of the variation between individuals. The differences between group means ranged from 20% to 30% of one standard deviation. Although these differences between groups were statistically significant, about 98% of the differences between individuals in mathematical achievement can apparently be attributed to some characteristic other than sex.

Some may see this finding as evidence of a need for more detailed research on sex differences. But the relatively small contribution of sex to achievement in mathematics raises the question of whether research into sex differences is cost effective. Benjamin Bloom has argued that, if a variable cannot be altered in the classroom or through counseling, that variable is not of practical importance to teachers.[8] Sex is not an alterable variable. Moreover, sex does not appear to affect

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Table 1. Average Percent Correct on Mathematics Test by Sex*

Subject Area	Males N = 1,929	Females N = 2,970	p	% of Variance Explained by Between-Group Differences
Whole number arithmetic	79.36 (14.83)	79.89 (13.83)	$p > .20$	.03
Fractions	65.94 (25.73)	71.12 (25.46)	$p < .01$	.97
Decimals	82.17 (18.49)	81.94 (19.05)	$p > .68$	.00
Ratio, proportion, and percent	55.97 (21.18)	51.80 (21.96)	$p < .01$	.85
Tables and graphs	74.21 (22.55)	73.67 (23.40)	$p > .42$	.01
Integer arithmetic	71.87 (16.62)	71.62 (16.13)	$p > .60$	.01
Elementary geometry	67.07 (21.03)	61.71 (21.51)	$p < .01$	1.49
Elementary algebra	58.11 (21.36)	57.78 (21.94)	$p > .60$	.01

*Standard deviations are enclosed in parentheses.

achievement greatly on minimal college mathematics survival skills. Perhaps researchers and teachers would be wiser to address other variables that can be altered and that have a greater effect upon learning.

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1. Perhaps the best-known studies are those involving potential college freshmen or national studies of school effectiveness. See, for example, Albert E. Beaton et al., *Changes in the Mathematics Abilities of High School Seniors, College Entrants, and SAT Candidates Between 1960 and 1972* (Princeton, N.J.: Educational Testing Service, 1977); James S. Coleman et al., *Equality of Educational Opportunity* (Washington, D.C.: U.S. Office of Health, Education, and Welfare, 1966); and V. G. Cicirelli et al., *The Impact of Headstart: An Evaluation of the Effects of Headstart on Children's Cognitive and Affective Development* (Washington, D.C.: Office of Economic Opportunity, 1969).

2. See, for example, Melvin Novick and Charles Lewis, "Prescribing Test Length for Criterion-Referenced Measurement," in Chester W. Harris, M. C. Alkin, and W. James Popham, eds., *Problems in Criterion-Referenced Measurement* (Los Angeles: Center for the Study of Evaluation, University of California, 1974), pp. 139-58.

3. Ibid.

4. See Joseph M. Scandura, "Prior Learning, Presentation Order, and Prerequisite Practice in Problem Solving," *Journal of Experimental Education*, vol. 34, 1966, pp. 12-18; idem, *Structural Learning I: Theory and Research* (New York: Gordon and Breach, 1973); idem, *Structural Learning II: Issues and Approaches* (New York: Gordon and Breach, 1976); and idem, "Structural Approach to Instructional Problems," *American Psychologist*, vol. 32, 1977, pp. 33-35.

5. These terminal behaviors — the particular stimulus-response associations that a student must demonstrate in order to indicate mastery of each module — correspond to what Benjamin Bloom ("New Directions in Educational Research: Alterable Variables," *Phi Delta Kappan*, February 1980, pp. 382-85) has called "cognitive entry skills."

6. John R. Bormuth, *On the Theory of Achievement Test Items* (Chicago: University of Chicago Press, 1970).

7. More complete information on the Mathematics Placement Test can be obtained from the author, Commonwealth Center for High Technology/Education, 900 Washington St., Wellesley, MA 02181.

8. Bloom, op. cit. ☐

Long-Neglected Factor: Reading Ability Of Vocational Students

by Eugene G. Sherrell

Reading ability has commonly been linked with levels of achievement in academic pursuits, because the primary mode of instruction is the textbook. This holds as true for vocational/technical studies as for college preparatory curricula. But my study of several Missouri vocational/technical schools suggests that the reading ability of vocational education students is often ignored.

Traditionally, students who are unable to succeed in liberal arts curricula are placed instead in practical arts and vocational education courses. Their inability to read well has often contributed to, if not caused, their low achievement in the liberal arts. The administrators and counselors who advise these students to enroll in vocational education programs apparently assume that learning by doing does not require the ability to read. I found, however, that vocational education students are actually given assignments from textbooks that require much higher levels of reading ability than the students possess.

In this study I sought to: 1) investigate the reading ability of the average vocational/technical student, 2) determine whether this reading ability was commensurate with the material the student was assigned to read, 3) determine the extent to which instructors supplemented the students' reading assignments with materials requiring little or no reading, and 4) assess the effect of students' reading ability on their achievement in their vocational courses.

My subjects were 267 students in the 10th grade or higher in three vocational/technical schools. These students were studying agriculture, auto body repair, auto mechanics, heating and air conditioning, electronics, and licensed practical nursing (LPN). I used the Nelson-Denny Reading Tests, Forms C and D, to measure the reading ability of each student. To identify textbook readability levels, I used the Dale-Chall and Fry readability formulas. Participating teachers described the instructional materials, supplemental to textbooks and requiring little or no reading, that they used in their courses. The teachers also provided me with the final grades earned by students in each course.

The Nelson-Denny Reading Tests measure three major elements of reading ability: vocabulary, comprehension, and reading rate. The forms are designed for use in grades 9 through 16 and are readily administered in a single class period.

Table 1 shows the averages of all reading scores by percentile rank (using national norms) and by area of study. The students I tested had an average vocabulary score at the 50th percentile, an average comprehension score at the 38th percentile, and an average reading-rate score at the 45th percentile. Their average total reading score shows that these vocational education students read below the national average for students with equal educational backgrounds.

When I translated average scores into grade levels, I found that these students functioned as a group at the 12th-grade level in vocabulary development, at the 10th-grade level in comprehension, and at grade level 9.5 in reading rate. Reading ability varied by area of study, however. Students enrolled in auto body repair,

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Table 1. Average Reading Scores of Missouri Vocational Education Students by Percentile Rank and by Area of Study

Area of Study	N	Vocabulary %ile	Comprehension %ile	Total %ile	Reading Rate %ile
Agriculture	53	42	38	39	49
Auto body	36	39	32	34	25
Auto mechanics	34	38	40	39	43
Electronics	38	61	46	55	55
Heating & air conditioning	27	34	35	33	37
LPN	79	66	36	56	52
Total	267	50	38	45	45

Table 2. Frequency of Final Grades and Percentage of Students Achieving Each Grade

Final Grade	Grade Levels 10		11		12		Above 12		Total	
	N	%	N	%	N	%	N	%	N	%
A	3	6	9	19	16	33	20	42	48	18
B	16	15	40	37	22	20	31	28	109	41
C	16	19	35	41	13	15	22	26	86	32
D	7	44	3	19	1	6	5	31	16	6
Drops*	2	22	1	11	4	44	1	11	8	3
Totals	44		88		56		79		267	100

*Drops in some cases may have been F's.

auto mechanics, and heating and air-conditioning classes read on average at the ninth-grade level. By contrast, LPN students — all of them high school graduates — read on average at grade level 11.9. All the students I tested were in the 10th grade or higher, but few were able to read at those levels — or at the levels on which their textbooks were written.

I collected samples of textbooks and supplementary reading materials from each teacher and measured them for readability level. The Dale-Chall formula derives a readability level from the number of difficult or unfamiliar words (i.e., words not on the Dale list of 3,000 familiar words) in a sample passage. The Fry formula derives a readability level from the number of syllables in a passage of 100 words. I found that the texts exceeded students' average tested reading ability by three to six grade levels.*

Next I asked the teachers to specify the amount of class time spent in the classroom and in the laboratory — and, of the classroom time, the amount devoted to reading, lectures, demonstrations, and other activities. The total amount of classroom time differed from subject to subject, but I found overall a fairly consistent pattern: one-third of classroom time devoted to supervised reading and two-thirds of classroom time spent on presentations by the instructor.

Instructors varied in the amount of time they devoted to the use of overhead projector transparencies, filmstrips, slides, and movies. But they generally agreed that they used visual aids to present from 40% to 60% of the information related to laboratory activities. They seemed to recognize the necessity for supplementing reading assignments because students had trouble understanding the materials.

Only 9% of all the students I studied earned less than a grade of C for the course in which they were enrolled (Table 2). About one-third (32%) earned C's, and 41% earned B's. Clearly, instructors had to supplement the assigned reading material with many visual aids, much personal instruction, and much laboratory time in order for students to achieve at so satisfactory a level.

If the students I studied are typical, most students enrolled in vocational/technical schools do not read at a level that enables them to profit fully from textbook assignments. Therefore, reading specialists should be available to give reading instruction in all grades. Moreover, teachers of all classes at every level should concern themselves with improving their students' reading skills, and these teachers should be given opportunities to take courses on the techniques of teaching reading as a part of their professional development.

My findings also suggest that most of the vocational education textbooks currently in use are written at a level too difficult for the students who use them. Thus vocational educators should always measure the readability levels of books they are considering for adoption. They should also assess the reading ability of their students in order to arrive at a satisfactory match between textbook readability level and students' skills. Technology instructors should concentrate, too, on helping students to master vocabulary specifically related to the field of study. Authors and publishers of textbooks could assist in this effort by developing lesson plans for teaching vocabulary.

Of all the reading skills I tested, the students scored lowest on comprehension. Therefore, reading teachers should concentrate on comprehension when they work with their classes. The development of diagnostic procedures and remedial activities to improve students' comprehension should be encouraged. Test developers might also consider creating a standardized test specifically intended to measure the reading abilities of vocational/technical students.

Finally, my findings suggest that many vocational educators use a wide variety of visual aids to supplement their classroom and laboratory activities. These instructors should be given sufficient time, equipment, and materials to develop such aids. ☐

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*A table showing readability levels of all textbooks used in this study (listed by course, not by title and publisher) is available on request from the author, 1155 S. National, Springfield, MO 65804.

All Title I Students Are Not the Same

by Timothy Young and Daniel J. Organ

Students who attend Title I elementary schools show significant differences in achievement that are related to socioeconomic status (SES). This was the major finding of our study of the reading scores of 276 fourth-grade students attending seven Title I elementary schools in an eastern Washington school district.

We used student participation in the federally sponsored free and reduced lunch program to control for SES. The 166 students who participated in the program scored as a group at the 37th percentile in total reading on the California Achievement Test. The 110 students who did not participate in the program scored as a group at the 51st percentile. A one-way analysis of variance indicated that the difference between the mean scores of the two groups was significant ($p < .05$).

From these findings we derive two important conclusions for teacher effectiveness research and for student selection into compensatory programs. The first is that researchers who attempt to describe the relationships between teacher characteristics and student achievement should use the student rather than the school to control for SES. Generalizations about effective instructional strategies for either lower- or upper-income students may not be valid if students are classified according to the SES of the school they attend. It is quite possible that a group of lower-income students drawn from schools identified as lower- *and* upper-SES might be more alike in their academic needs and in the ways they respond to instructional strategies than a group of students attending a Title I school.

Our second conclusion is that state and federal funds would be better spent if allocated according to individual student — rather than school — characteristics. Although it would be more difficult to administer such a program, this approach would insure that increasingly scarce compensatory dollars would reach those students who truly need them. Given the national climate of retrenchment and the emphasis on cost effectiveness in the public sector, this suggestion may prove not only prudent but necessary. ☐

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